**BOTTLE SHIPPING SYSTEM WITH MULTIPURPOSE INSERT**

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**ABSTRACT**

Disclosed are systems and methods for an improved bottle packaging system and shipping container, and more particularly to a container wherein a common insert design is employed to stabilize the bottle(s) and to provide padding therefore during shipment to resist breakage and damage. The improved insert design permits a common insert to provide stabilization to the bottom and shoulder of the necked bottle (s) used for shipping chemicals and the like.
FIG. 15
BOTTLE SHIPPING SYSTEM WITH MULTIPURPOSE INSERT

[0001] Priority is claimed from the following provisional application, which is also hereby incorporated by reference for its teachings, "IMPROVED BOTTLE SHIPPING SYSTEM WITH MULTIPURPOSE INSERT", by Gilbert et al., Application No. 60/042,584, filed on Jun. 7, 2007. This application is also a continuation-in-part of the following co-pending and commonly assigned design patent applications:

[0003] U.S. Ser. No. 29/280,846, filed Jun. 8, 2007, for a "MULTI-USE INSERT FOR FOUR CONTAINERS;" and
[0004] U.S. Ser. No. 29/280,843, filed Jun. 8, 2007, for a "MULTI-USE INSERT FOR SIX CONTAINERS," all of which are also hereby incorporated by reference in their entirety.

[0005] The disclosed packaging system is directed to an improved bottle shipping container, and more particularly to a container wherein a plurality of common inserts are employed to stabilize the bottle(s) and to provide impact resistant cushioning during shipment of liquids and the like. The improved insert design includes, in one embodiment, at least a plurality and preferably three commonly configured inserts, one to receive and secure a bottle bottom, another to receive and restrain a bottle shoulder and neck region (bottle top) u a third placed over the bottle tops and other inserts as a spacer, used for shipping chemicals and the like.

BACKGROUND AND SUMMARY

[0006] Glass bottles and similar containers are used for shipment of liquid products that may, for one reason or another, not be storable or shipable in plastic containers (e.g., made from polystyrene, polypropylene or polyvinyl chloride). For example, chemical products that must retain a high level of purity, are shipped in glass bottles because of the adverse reactions with plastic containers. However, glass bottles are brittle and shutter on impact. Therefore, it is necessary to cushion glass bottles containing chemical products to prevent breakage during shipping and storage. This is necessary, not only to protect the product itself, but also because these products are frequently solvents or other chemicals that present an environmental hazard if leaked or spilled.

[0007] Disposing of packaging material is an additional burden on those who receive bottles and who are already burdened with disposing of not only chemical waste but also of the bottles and packaging materials themselves. Any arrangement that can reduce the disposal burden on an end user of chemical products shipped and stored in bottles is of substantial importance. Moreover, it is desirable that such packaging materials be recyclable and made from recycled, or at a minimum, biodegradable materials.

[0008] Currently, it is generally known to package bottles of chemicals in expanded foam polystyrene (EPS) packing material, which is placed around the bottles within a corrugated paperboard container. A drawback of using EPS is that solvents in or on the bottles can dissolve the EPS, thus reducing or eliminating its cushioning purpose. Moreover, once the package is opened there are two discreet material groups which must be disposed of—the corrugated paper board as well as the expanded polystyrene. Polystyrene foam also has environmental impacts itself, both because the gases that it releases as it decomposes and because of its exaggerated physical presence resulting from its rigid expanded cell structure that consumes a great deal of volume in landfills. Restricting the use of foamed polystyrene packaging is a priority of many solid waste and environmental organizations as well as governments. For example, a number of US cities have banned polystyrene food packaging.

[0009] In view of these considerations, there is a need for an economical replacement of polystyrene with a packing system that eliminates the dual waste streams and that uses a biodegradable packing material for which there are established, environment-friendly waste management processes in place.

[0010] In light of the above-noted problem, the disclosed packaging system provides an improved package with a molded insert using a common design. More specifically, the system provides both impact protection or cushioning for the bottle(s) and also assures the ease of use, and potential re-use, of such a system by employing a common insert design. In one embodiment, the insert may be used in several different orientations within the package to provide the requisite cushioning and shock absorption to prevent breakage. The use of three identical inserts has at least a two-fold advantage, (i) a multi-use insert limits the packing material supply chain to a single part, and (ii) eliminates operator packaging and assembly errors.

[0011] Disclosed in embodiments herein is packaging for at least one bottle, comprising: a carton of generally rectangular cross-section having paper board panels defining a space, the panels meeting to define four interior corners; and three identical inserts, a bottom insert having a curvilinear opening so as to receive the bottom of the at least one bottle and supporting the bottle in a spaced-apart and padded relationship with the bottom, sides and interior corners of the space, a middle insert placed in an inverted orientation (relative to the bottom insert) for receiving the neck and shoulder of the at least one bottle and supporting the bottle in a spaced-apart and padded relationship with the sides and interior corners of the space, and a top insert for maintaining the middle insert in position relative to a top of the space and the neck of the bottle.

[0012] Further disclosed in embodiments herein is a packaging insert cell, comprising: a generally cylindrical depression, the bottom of which includes a shoulder extending in segments about the bottom thereof, said shoulder segments providing contacts points for a bottle partially inserted into said depression, and a generally circular hole therein; an outer skirt, extending at an almost vertical direction having a draft of about 1 to about 5 degrees, preferably about 3 degrees, said skirt extending around the entire periphery of the cell; and a plurality of ribs extending between the cylindrical walls of the depression and the skirt, such that said ribs resist the compaction or compression of the skirt relative to the cylindrical walls of the depression.

[0013] Also disclosed herein is a method for packaging at least one bottle, comprising: positioning a bottom insert, having at least one bottle-receiving cell therein, within a bottom of a carton; inserting at least one bottle in the bottom insert; placing a middle insert within the carton in an inverted orientation relative to the bottom insert; the middle insert fitting over the neck of the bottle; placing a top insert within the carton, above the middle insert; and securing a top surface of the carton.
BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an illustration of a 4-pack insert embodiment from a top view; FIG. 2 is a cross-sectional view cut along section line A-A of FIG. 1; FIG. 3 is a bottom perspective drawing of the insert embodiment of FIG. 1; FIG. 4 is an enlarged top view of a corner, depicting a single cell of the 4-pack insert; FIG. 5 is a partial perspective view of the insert; FIG. 6 is a planar side view of the insert in FIG. 5; FIG. 7 is an exploded illustration depicting the assembly sequence for a packaging system in accordance with a 4-pack insert embodiment; FIG. 8 is a cut-away view of the insert packaging system for shipping four bottles; FIG. 9 is a perspective view of the corrugated cardboard shipping container for the system of FIGS. 7 and 8; FIG. 10 is a phantom view of the fully assembled bottle shipping system; FIG. 11 is an inside view illustrating the hand-hole within a sidewall of the shipping system; FIG. 12 is a top-open view of the 4-pack bottle packaging system; FIG. 13 is an illustrative example of a supplemental packing insert used in the 4-pack system; FIGS. 14A-E are illustrative examples of an alternative embodiment of the 4-pack bottle shipping system, including design alternatives for; FIG. 15 is a flowchart illustrating one example of a method associated with use of the 4-pack bottle shipping system; FIGS. 16-18 are cut-away perspective views of embodiments depicting single, four and six bottle packaging systems, respectively; and FIGS. 19-22 are illustrative representations of a formed screen employed to mold the 4-pack insert described herein.

The various embodiments described herein are not intended to limit the invention to those embodiments described. On the contrary, the intent is to cover all alternatives, modifications, and equivalents as may be included within the spirit and scope of the appended claims.

DETAILED DESCRIPTION

As more particularly set forth below, the disclosed system and methods for assembling an improved bottle shipping container, specifically a container wherein a common insert design is employed to stabilize the bottle(s) and to provide padding during shipping and handling. As used herein the term bottle is intended to cover both a conventional glass bottle having a base, sides, should, neck and re-sealable top, as well as other types of containers used for the storage and shipment of liquids and the like. The various embodiments described herein disclose various configurations for the shipping containers, and it is further contemplated that the shipping systems disclosed may also be used to ship containers other than traditional bottles. Accordingly, the use of the term bottles is not intended to limit the disclosure or claims to conventional bottles or bottle designs. The improved insert design and associated packaging system permits a common insert to provide stabilization to the bottom and upper shoulder of the necked bottle(s) used for shipping chemicals and the like. Although generally described relative to a 4-bottle (quad) pack, it will be appreciated that the disclosed insert may be employed in packaging for any number of bottles (e.g., a single, double, triple, quad and six-pack configuration). Moreover, various sizes and types of bottles may be packaged using the disclosed insert, or modifications thereof.

Referring to FIG. 1, an insert component of a 4-pack embodiment is illustrated from a generally top view. The 4-pack insert 100 includes four packaging cells 110. Each cell comprises a generally cylindrical depression defined by a continuous wall 112. The bottom of the depression, at the base of wall 112, includes a shoulder extending in segments 114 about the bottom thereof. The shoulder segments providing contacts points for the lower part or bottom of a bottle partially inserted into the depression. The insert 100 also includes a generally circular hole 120 located in the center and bottom of each depression. The insert also has an outer skirt 130, extending at an almost vertical direction and having a positive draft of about 1 to about 5 degrees, preferably about 3 degrees, the skirt extending at least substantially all the way around the entire periphery of the 4-pack. It will also be appreciated that the cylindrical walls 112 are not completely cylindrical in shape but may have a similar draft or taper, being slightly smaller in diameter at the bottom where the bottle-bottom is received as will be further described below.

Referring to FIG. 2, the cutaway along line A-A of FIG. 1, illustrates the thicker and solid or semi-solid ribs 140 extending between the cylindrical walls of packing cells 110 and outer skirt 130, such that ribs 140 maintain the spaced-apart relationship between the cells and the skirt and resist the compaction or compression of skirt 130 relative to the cylindrical walls of each packing cell 110. When a bottle 200 is inserted within each cell 110 (see, e.g., FIGS. 14-16), the bottle 200 is in frictional contact with the walls 112 so that the bottle is held in position during shipping and storage.

FIG. 3 is an alternative view of the underside of insert 100. Ribs 140 are illustrated as providing a solid, continuous bridge between the cylindrical walls and the skirt of the insert as well as between adjacent inner cylindrical walls. The skirt 130 also provides a generally continuous lower edge that is intended to provide a rather firm fit within a corrugated box or carton 300, thereof, as will be described in detail below. A deep draft angle of about 1 to about 5 degrees and preferably about 3 degrees, is employed to assure that the skirt wall 130 is in contact with the side panels of the box, (shown as a in FIG. 6) thereby assuring that the insert does not easily move within carton 300. As noted above, a similar draft or taper is also provided on the cylindrical walls of packing cell 110 to permit a tight fit or contact with the bottles themselves.

Referring next to FIGS. 4, 5 and 6, depicted therein are enlarged views of a corner of the insert 100. In FIG. 5, the cells are shown as having a plurality of recessed portions of walls 150 around and between packing cells 110, where the height of the walls is reduced in a generally arcuate (almost semi-circular) shape. Such a design provides increased stiffness to the individual cells, and permits the formation of the ribs 140 described above—particularly in a fiber-molded embodiment of the insert 100. Each insert also has a plurality of flat regions 160 on the top, and 162 on the bottom thereof (e.g., as referenced in FIG. 3). Such regions are aligned, and when stacked in a normal or opposing configuration the flat edges of the adjacent inserts 100 contact one another and prevent nesting of the inserts—thereby assuring that the inserts remain in place within a package and do not alter the volume they were designed to occupy when in an opposing stacked configuration.
Referring briefly to FIG. 6, corner "posts" 180 serve the purpose of providing cushioning to prevent breakage of the bottles in the event of a corner, top or bottom, point of impact. Similarly, separators in the rib regions 140, along with center separator 184, prevent the bottles from contacting one another in the event of the carton 300 is hit or dropped on its side.

The cutaway view of FIG. 2 further illustrates the dense or generally solid fiber ribs 140 that span between the outer skirt walls 130 of the insert and the inner cylindrical walls 112. Such ribs are designed to resist compression and to provide a cushioned response when the package is dropped or otherwise subjected to force that might normally damage the enclosed bottles or similar breakable containers. It will also be appreciated that the ribs 140 are located at the regions of the insert where the walls have a reduced height to ensure a relatively dense material flow by overcoming limitations during production, whereby it is difficult to fill greater heights in the mold while maintaining a solid rib cross-section. The thickness of ribs 140, illustrated by arrow 142 in FIG. 2, may be modified in various embodiments based upon the size and weight of the bottles to be packaged/shipped. As will be appreciated, it may be desirable to include larger and/or wider ribs for larger bottles.

Referring to FIG. 7 in conjunction with FIGS. 8, 12 and 16-18, FIG. 7 depicts the assembly sequence of three identical packing inserts 100 when used in the packaging of bottles 200 within a corrugated paperboard carton 300. Notably insert 100A is placed into the bottom of carton 300, followed by the positioning of at least one bottle within any packing cell 110 of insert 100A. Subsequently, insert 100B is placed in the box in a "top down" orientation to fully engage the peripheral surface of the tapered neck and shoulder of bottle 200 as seen in FIG. 8 and in the top view of FIG. 12. Furthermore, insert 100C is placed over the top of the bottle, such that the necks 210 of the bottles 200 extend through the circular openings 120 of the inserted insert 100B which now acts as a "collar" to hold the top of the bottle in place as the top shoulders of the bottles contact the walls 112 and shoulder segments 114 of the insert. Above middle insert 100B, a top insert 100C is placed to fill out the packaging, and to hold middle insert 100B (and the bottles) in place relative to the top of the package once the top panel flaps 330 are sealed.

As illustrated, the combination of the three inserts (100A, 100B and 100C) thereby provides a package that is easily and repeatedly assembled (or disassembled) and enables reassembly and shipping of the bottle or other fragile containers in a manner that prevents breakage and reduces the demand for packaging materials. It will be further appreciated that insert 100C provides an essential "crash zone", whereby the insert is free to collapse in order to absorb the energy from an impact as a result of rough handling. The cutaway illustration of FIG. 8 further shows the packaging structure in accordance with a 4-pack embodiment whereby the corner impact zones 350 and are essentially isolated from bottles 200 by air cavities formed within the three inserts. Additionally, stacking loads between top 330 and bottom 310 of box 300 are supported by posts 180, in addition to compressive strength of box 300.

FIG. 9 shows the empty corrugated paperboard carton 300, consisting of single-walled conventional construction. It will be appreciated that various configurations of the box may be employed, but it would include a bottom panel(s) 310, side panels 320, and top panel(s) 330. The side panels 320 define a generally square or rectangular package cross-section having at least four corners 350. As will be further appreciated, the carton may be further reinforced, and may have alternate shapes and features as may be required by the particular application or types of containers being stored and shipped therein.

Turning next to FIGS. 10 and 11, shown therein is the positioning of a hand-hole within a side or sides of carton 300. More specifically, at least two opposed side panels 320 have oblong hand holes 322 cut therein to provide a means to grasp and lift carton 300. The at least two sides 320 of said carton 300 include hand-holes 322, where the hand-holes are cut or placed at a position where fingers 328 of a hand are inserted into the carton flaps 324 of the hand-hole and further contacts lower portion 160 of the middle inverted insert 100B, thereby translating the lifting force through the inserts 100B and 100C, and uniformly distributing it across the entire top 330 of carton 300. This design feature eliminates problems associated with torn out hand holes when the load is only carried by sidewall 320 of carton 300. Additionally, by providing a secure lift point, the package is less likely to be dropped, thereby promoting a safer environment for the handlers as well as the contents.

Briefly referring to FIG. 13, it is anticipated that supplemental inserts may be used to accommodate various bottle profiles and to further modify or improve the impact resistance of the packaging system. Intermediary insert 342, as also seen in FIG. 8, provides for additional bottle constraint in the immediate open area between insert 110A and inverted insert 100B. While only a the three-insert configuration is required in a majority of the cases, intermediary inserts 342 may be employed on an application specific basis to assure that the bottles themselves do not come into contact with one another when the shipping package is dropped.

Referring next to FIGS. 14A-14E and 15, depicted in FIGS. 14A-14E are alternative embodiments employing an intermediary bottle divider, and in FIG. 15 a method of using such dividers as an interim bottle or container shipping system. In use, the glass bottles must be protected from contact with one another because such contact may result in the weakening of the bottle. Thus, it is important to avoid contact during the loading and unloading of the bottles from a shipping container or carton. FIGS. 14A-14E depict two alternatives that may be employed to assure that the bottles do not come into contact, both when placed in or removed from the box for filling. In particular, as illustrated in FIG. 15, the present disclosure contemplates the use of the shipping system to first ship the bottles empty to a customer who then fills the bottles to order and re-ships the bottles to their customer using the same carton.

The various components depicted in FIGS. 14A-14D may be employed and assembled as depicted in the partial assembly drawing of FIG. 14E. More specifically, insert 100 is modified to incorporate a plurality of molded recesses or slots 400 into which an interim divider 410A, B is inserted. Although it may be possible to complete the system without using the slots, it is believed that the slots will facilitate positioning the dividers and preventing them from moving when the bottles are being loaded or unloaded, as well as when in transit for shipment of the empty bottles to the filling location. FIG. 14A shows a perspective illustration of the insert 100, where the slots are indicated as being located in the generally flat regions on the top surface 160 of the insert. FIG. 14B shows the side view of the insert of FIG. 14A. As indicated the slots 400 would receive the dividers to be added to divide the 4-pack into separate sections. It will be appreciated that similar arrangements may be made for packages designed to ship more, or fewer, bottles including similar fragile containers.
Referring to FIGS. 14C and 14D, depicted are two alternative dividers 410A and 410B, each being assembled to provide a divider that cannot easily be disassembled or folded so that it fits within the shipping carton without dividing the carton into the bottle sections. Such a design prevents (or at least reduces the likelihood of) error on the part of the person that is handling the bottles and packing or re-packing the bottles. The assembly drawing of FIG. 14E is a representative illustration of the manner in which the divider 410A or 410B (shown in dashed line) is fitted to the slots 400 in insert 100.

Turning to the flowchart of FIG. 15, the methodology contemplated for use with the shipping container is as follows: first, the shipping carton is assembled at 710, and a first insert (100) is placed in the bottom of the carton at 712, in an orientation for receiving the bottoms of bottles. Next, at 714, the divider 410A or 410B is placed into the carton and seated in slots 400. At 716, the empty bottles are inserted and are prevented from contacting another during insertion into the carton by the divider. At 718, a second insert 100 is placed over the bottles and the divider and the top of the carton is closed for shipping at 720. The carton is then shipped at 730 to a location where the bottles are to be filled.

After shipment of the empty bottles, the carton is opened at 740, and the bottles are removed at 742 for filling. The bottles are filled at 744 with a liquid or other material, and are then returned to the carton at 748. Once again, the divider remains in the carton at 748 to prevent the bottles from coming into contact with one another in the carton during bottle insertion. Once all the bottles have been placed into the carton, the divider is removed at 750. At this point the divider may be discarded, recycled, or returned to the carton manufacturer for reuse. Next, the second or middle insert is placed, in an upside-down orientation, over the bottle necks and tops at 760 so that the middle insert is “seated” and holds the bottles relative to the carton and one another. At 762, a third or top insert is then placed into the carton thereby providing the carton with an insert to fill the gap or space above the middle insert. Finally, the carton may be closed and sealed at 764 for shipment of the full bottles therein. While a general set of steps is described relative to FIG. 15, it will be appreciated that additional or alternative steps may be employed—particularly relative to handling of other types of bottles or containers. It may also be that the cartons may be employed as part of an automated loading or filling process.

Referring, lastly, to FIGS. 16-18, depicted therein is an illustrative example of a “female” mold tool 500 used to manufacture the insert of FIG. 1. It will be appreciated that various mold configurations may be employed, and that certain mold elements may need to be altered or customized to the method of manufacture and the materials employed. In one embodiment the inserts 100 are made by FIBERCELL PACKAGING, LLC using the mold depicted in FIGS. 19-22, and a fiber material. In one embodiment the fiber material is made from recycled cellulose or other fibrous or pulp materials mixed with water or other carrier and deposited on the surface of the mold (fiber is attracted to screen- like mold surface 510 by selectively pumping water from the reverse side 520 of the mold).

In one embodiment, the fiber may include at least 50% Kraft paper material and less than 50% newsprint, and more particularly, about 60% Kraft paper and about 40% newsprint. It is however, possible to use varying compositions, even compositions that are at or about 100% Kraft paper material, or at or about 100% newsprint, as well as compositions that utilize alternative types of pulp/fiber materials as noted herein. One source of such materials may be recycled paper products such as cardboard, newsprint, etc. One process involves creating a vacuum formed plastic mold 500 representative of the insert shape depicted in the embodiments—described above. This mold or “tooling” is mounted on a plate, which is subsequently mounted in pans of pulp molding machines. These machines include a tank that is continuously supplied with a slurry of corrugated Kraft and newsprint pulp. The pans are attached to a rotating wheel and as the wheel revolves, the pans are submerged in the pulp tank. The molds are connected to a vacuum, which draws the pulp solids onto the mold surface 510 and removes water. At the end of a rotation of the wheel, the individual pan reaches the unload station where an air blast blows the semi-solid pulp insert off of the mold 500 and onto a negative fixture for support. The insert is then transferred directly to a belt of a large multi-zone drying oven (e.g., gas-fired), which removes the remaining moisture. At the end of the oven, the inserts may be packed for shipment.

Referring briefly to FIG. 22, a close-up illustration of the mold surface 510 is depicted, which shows the detail of a single cell 110, by which the walls 112 and segments 114, as well as hole 120 are formed. More particularly, plug 540 results in hole 120 as the solid plug does not collect any fiber during formation. The contours between stubs 542 and 544 result in the respective segments 114 along the bottom of each cell. Similarly, tapered walls 546 result in the generally cylindrical, albeit tapered, walls 112 of each cell. Finally, the recessed portions 150 are formed as a result of the bridge regions 548 that extend between the cell and the skirt area or an adjacent cell.

It will be further appreciated that various alternative materials may also be used, including various pulps, cellulose, sugar cane waste, palm waste, expanded starches, and foams (EPS). Preferably the materials employed in making the insert are recycled and/or recyclable. It is also contemplated that various handling tools and techniques may be employed to assist in the removal of the molded fiber inserts prior to and/or during a drying process (e.g., before stiffness and dryness of the insert achieves a desired level).

The packaging system employing the disclosed inserts not only provides for inexpensive packaging, it further provides a solution that is resistant to bottle breakage or damage. The disclosed packaging comprising inserts 100, bottles 200 and container 300, meet the requirements for packaging as tested in accordance with one or more standardized tests, including: ASTM D5276, ASTM D4577, ASTM D999 and ISO 555. Furthermore, use of the common design for the bottom, middle and top inserts in the disclosed packaging system, permits the efficient use, reuse and re-packaging of such materials—thereby reducing the cost of handling and shipping liquids in various bottle configurations. Molded pulp packaging, in accordance with one embodiment of the insert, protects the product and can safely cushion even the most delicate contents such as a bottle(s). A lightweight and cost-effective alternative to most conventional types of packaging, the product is made from 100% recycled materials and is 100% biodegradable.

As described above, the various embodiments disclosed provide packaging for at least one bottle. Such a packaging system comprises: a carton of generally rectangular cross-section having paper board panels defining a space, the panels meeting to define four interior corners; and three inserts having a common design, where one insert is used as a bottom insert and has a curvilinear opening to receive the bottom of a bottle to support the bottle in a spaced-apart and padded relationship with the bottom, sides and interior corners of the carton. A middle insert placed in an inverted
orientation (relative to the bottom insert) for receiving the neck and shoulder of the bottle and supporting the bottle in a spaced-apart and padded relationship with the sides and interior corners of the carton, and a top insert for maintaining the middle insert in position relative to a top of the carton.

2. The packaging system according to claim 1, wherein said carton is of a generally rectangular cross section.

3. The packaging system according to claim 1, wherein at least two sides of said carton include hand-holes, and where the hand-holes are cut at a position such that a hand inserted therein is supported by a lower portion of said middle insert

4. The packaging system according to claim 1 wherein said inserts are made of recyclable material selected from the group consisting of: cellulose, paper pulp, sugar cane, palm waste, and expanded starches.

5. The packaging system according to claim 1 wherein said inserts are made from re-cycled fibrous material consisting of recycled paper products.

6. The packaging system according to claim 1, wherein said inserts each include a cell for receiving the bottle, said cell comprising a generally cylindrical wall that terminates in a segmented shoulder.

7. The packaging system according to claim 6, wherein said inserts further include a skirt in contact with the sides of said carton.

8. The packaging system according to claim 7, wherein said cell is maintained in a spaced-apart relation to said skirt, and thereby the wall of said carton by a plurality of ribs.

9. A packaging insert, comprising: a cell including a generally cylindrical depression, the bottom of which includes a shoulder extending in segments about the bottom thereof, said shoulder segments providing contacts points for a bottle partially inserted into said depression, and a generally circular hole therein; an outer skirt, extending substantially around the entire periphery of the cell; and a plurality of ribs connecting the cell and the skirt, such that said ribs maintain the spatial relationship between the cell and the skirt.

10. The packaging insert according to claim 9, wherein said skirt has a taper such that at least a portion of the skirt contacts a container in which the insert is used.

11. The packaging insert according to claim 10 wherein said ribs resist compaction and thereby prevent the bottle from moving the container.

12. A method for packaging at least one bottle, comprising: positioning a bottom insert, having at least one bottle-receiving cell therein, within a bottom of a carton, inserting at least one bottle in the bottom insert; placing a middle insert within the carton in an inverted orientation relative to the bottom insert, the middle insert fitting over the neck of the bottle; placing a top insert within the carton, above the middle insert; and securing a top surface of the carton.

13. The method according to claim 12 wherein each of said inserts are of a common design.

14. The method according to claim 13, further including placing an intermediary insert in the carton between the bottom and middle inserts.

15. The method according to claim 13, further including producing each of said inserts from a common mold design.

16. The method according to claim 15, wherein said inserts are produced using a fibrous material.

17. A bottle packaging system, comprising: a carton having paper board panels defining a space, the panels meeting to define a plurality of interior corners; and a plurality of inserts, each of said inserts having a common design including cells to support bottles therein in a spaced-apart and padded relationship with the sides and interior corners of the carton.

18. The bottle packaging system according to claim 17, wherein said system further includes a divider to separate the cells, and bottles therein, during bottle loading and unloading.

19. The bottle packaging system according to claim 17, wherein said system includes at least two inserts for shipment of bottles.

20. The bottle packaging system according to claim 17, wherein said system includes at least three inserts for shipment of bottles.