PRODUCT PACKAGING AND DISPLAY SYSTEM AND METHOD HAVING ENGAGING MEANS FOR STRUCTURAL DISPLAY SUPPORT

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ABSTRACT

A product package useful for a variety of display applications enables upright stability for commercial display of the package with a front side adapted for display purposes and engagement elements for providing upright stability to said product package for display of said front side by engagement with another adjacent located product package.
PRODUCT PACKAGING AND DISPLAY SYSTEM AND METHOD HAVING ENGAGING MEANS FOR STRUCTURAL DISPLAY SUPPORT

REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of prior copending provisional application serial No. 60/425,610, filed Nov. 12, 2002.

FIELD OF THE INVENTION

[0002] The present invention generally relates to product packaging and, more particularly, to product packages which are intended to engage adjacent located, product packages.

BACKGROUND OF THE INVENTION

[0003] Product packaging has developed significantly over the course of many years in response to a variety of influences including changes in product package materials, changes in products, changes in displays and marketing techniques, and the need for efficiency. One of the most common product packages may well be the cardboard box, which may easily be stacked on shelves for purposes of display and ready access by users. Smaller boxes might be additionally contained within a display tray, similarly made of cardboard, which is discarded by a retailer once its display function is no longer needed. Both the individual product boxes along with the display tray would include advertising and/or brand marking to identify the product.

[0004] Another more recent form of product packaging is the blister package or blister pack, which is a rigid or semi-rigid, clear plastic container. Blister packs are typically molded from sheets of plastic using heat and pressure (and/or vacuum) and thus are not restricted in form in the same manner as folded flat cardboard. Blister packs may be used for efficiently packaging a wide variety of shapes and even for enclosing simple cardboard boxes. The sealed nature of blister packs restricts both product tampering and pilfering and avoids the necessity of additional product branding and advertising, as anything appearing on the enclosed product or package may be readily examined. Products are typically enclosed by sealing opposing sides of a blister pack around a periphery extending along the top, bottom and sides thereof, thereby allowing clear viewing of the front and back of anything contained therein. As such, some blister packs and a packaging system which includes a plurality of blister packs may require structural support in order to provide a unified display structure. One particular version of a packaging system is shown in U.S. Pat. No. 6,152,305. The individual blister packs are shown therein with stackable support trays having slots in the side walls for receiving flanges of the blister packs and thereby provide structural support.

[0005] One particular avenue of retail marketing in which the need for structural display becomes important is a that of warehouse or club outlets. Such outlets typically include very large shelving and may be intended for minimal involvement of staff for purposes of shelf stocking. To this end, staff should only need to remove a cover or large portion of a shipping carton to display the products therein. As such shipping cartons typically include minimal advertising, the enclosed products should have sufficient structural integrity to allow removal of a significant portion of the shipping carton to thereby enhance product display. Blister packs have played a significant role in such warehouse displays, but often still require additional structural support, such as cardboard trays, to adequately meet warehouse display demands. Unfortunately, this approach still requires the disposal of both an exterior container, such as corrugated cardboard, as well as an interior structural support member, such as cardboard trays. In some cases this may require separate disposal for recycling of the different materials.

SUMMARY OF THE INVENTION

[0006] In accordance with the marketing needs described above, it is an object of the present invention to provide packaging for individual products which packaging is adapted to engage similar, adjacent located, packaged products and thereby provide a combined display structure without the need for additional structural items.

[0007] It is a further object of the present invention to provide such product packaging in the form of blister packs.

[0008] It is a still further object of the present invention to provide such self engaging product packaging in a form that may be readily separated by a customer without adversely affecting the structure of the remaining displayed products.

[0009] Accordingly, one embodiment of the present invention provides a product holder including a partially rigid structure having a first side adapted for display purposes and engagement means for providing upright stability for display of the first side by engagement with another adjacent located product holder. The engagement means may include one or more interference members adapted to engage an adjacent located product holder. These interface members may be adapted to engage interface members of an adjacent located product holder. The product holder may further include a second side opposed to the first side, wherein the interface members extend from at least one of the first and second sides. The interface members may be formed as part of a ridge located on at least one side and the ridge may be adapted to allow manual access between engaged product holders that are adjacent located and mutually engaged by the interface members. A plurality of interface members may be oriented by the partial rigidity of the structure to maintain engagement with an adjacent located product holder. The product holder may also be adapted to flex under manual insertion between engaged product holders. Each first and second side may include at least one ridge adapted to provide support to the interface members. The interface members on the respective first and second sides may be complementary and adapted to only engage interface members extending from a respective opposite second and first side. The lower end of a product holder may be adapted for substantially vertical movement with respect to an adjacent located product holder.

[0010] In another embodiment, the present invention provides a product package including a partially rigid structure having a front side adapted for display purposes, a rear side opposed to said front side, and at least one interface member located on each front and rear side and adapted for providing upright stability to said product package for display of said front side by engagement with another adjacent located product package. Various modifications may also be made as discussed for the first embodiment.
In yet another embodiment, the present invention provides a method for packaging products, including the steps of enclosing products in a plurality of product packages, wherein each product package includes a partially rigid structure with a first side adapted for display purposes, and engagement means for providing upright stability for display of said first side by engagement with another adjacent located product package, and engaging said plurality of product packages together by said engagement means. The step of engaging the product packages may cause the first side of all engaged product packages to face in the same direction. Such engaged product packages may be located in a single container and may also be stacked. Such stacked groups of engaged product packages may be displayed by removal of all or part of the single container.

In still another embodiment, the present invention provides a product display system including a plurality of product packages each having a first side adapted for display purposes and engagement means for providing upright stability for display of the first side by engagement with another adjacent located product package, wherein the plurality of packages are engaged together by the engagement means. The first side of each product package may face in the same direction. A second plurality of engaged product packages may be stacked on top of the first plurality of product packages. The first said and second plurality of engaged product packages may be stacked in a single shipping container adapted for display by removal of part or all of the single container.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is illustratively described and shown in reference to the appended drawings in which:

FIG. 1 is a perspective view of a blister package constructed in accordance with the prior art;

FIG. 2 is a perspective view of a multiplicity of blister packages of FIG. 1 held in a tray for display purposes;

FIG. 3 is a perspective view of a product package constructed in accordance with one embodiment of the present invention;

FIG. 4 is a perspective view of two product packages of FIG. 3 in close proximal location;

FIG. 5 is a perspective view of a multiplicity of engaged product packages of FIG. 3 as they might be used for a display;

FIG. 6 is a perspective view of the multiplicity of product packages of FIGS. 3-5 as they might alternatively be used for a display;

FIG. 7 is a perspective view of two groups of the product packages of FIGS. 3-6 as they might be stacked for shipping and display purposes;

FIGS. 8 and 9 are close up perspective views of portions of the product package of FIG. 3;

FIG. 10 is a perspective view of a pair of product packages formed in accordance with another embodiment of the present invention;

FIG. 11 is a perspective view of a group of the product packages of FIG. 10;

FIG. 12 is a perspective view of a pair of product packages constructed in accordance with yet another embodiment of the present invention;

FIG. 13 is a perspective view of a pair of product holders constructed in accordance with still another embodiment of the present invention;

FIG. 14 is a sectional view of a pair of product holders of FIG. 13, which product holders are mutually engaged in accordance with the present invention; and

FIG. 15 is a perspective view of a two groups of the product holders of FIG. 14, which groups are stacked together for both shipping and display purposes.

DETAILED DESCRIPTION OF THE DRAWINGS

A blister package 10 constructed in accordance with the prior art is shown in FIG. 1. Blister package 10 is typically formed from a pair of partially rigid clear plastic sheets to have a front surface 12 and a substantially similar rear surface 13. Each sheet is typically shaped with heat and pressure (or vacuum) to have a peripheral ridge 14 and a centrally located product pocket 16. Front side 12 typically includes display or advertising material which may take the form of a paper or cardboard insert located between front and rear sides 12, 13 as well as the product itself located in product pocket 16.

Blister package 10 is designed to protect an enclosed product from impact by means of ridges 14, which extend further outwardly than product pocket 16 and have complementary abutting surfaces 17. Ridges 14 also add stillness to blister package 10. The overall stillness of blister package 10 may also be effected by the type of plastic used and its thickness.

During packaging, a product is inserted between the opposing front and rear sides 12, 13, and energy, such as r.f., is used to seal the peripheral edge 18 thereof. Edge 18 is inherently unstable for supporting product package 10 in a vertical display position as shown in FIG. 1.

FIG. 2 shows a multiplicity of identical blister packages 10 adjacent located in a tray 20, which may be used for both shipping and display purposes. Due to the inherent instability of edge 18, tray 20 includes a multiplicity of slots 22 located in each side 24 of tray 20 for supporting product packages 10 in a vertical position to display front side 12.

The present invention is now described in reference to FIG. 3 et seq., in which FIG. 3 is a perspective view of two halves of a product package 30 which may be used to construct a product package in accordance with one embodiment of the present invention.

Product package 30 is constructed from opposed sheets of clear plastic in the same process as the prior art blister package 10 and includes a front side 32 and a rear side 34. Front side 32 and rear side 34 each include a centrally located product area 36a, 36b, respectively, which combine to form a common product area 36 (FIG. 4), and peripheral edges 38a, 38b, which are sealed together to form a common peripheral edge 38. Product package 30 also includes
engagement elements 40, 41 for providing upright stability to the product package 30 for display of the front side 32 by engagement with another adjacent located product package.

[0034] FIG. 4 shows a pair of product packages 30 located in close proximity as they are about to be mutually engaged by engagement elements 40, 41. Engagement elements 40, 41 are formed with interface members 42, 43, respectively, which are adapted to engage an adjacent located product package. In the present embodiment, interface members 42, 43 extend from both front side 32 and rear side 34, respectively, and are adapted to engage complementary interface members 43, 42, respectively, of an adjacent located product package 30. In this manner, interface members on each respective front side 32 and rear side 34 are complementary and adapted to only engage interface members of an adjacent located product package extending from a respective opposite rear side 34 or front side 32 of their respective product packages.

[0035] Front side 32 and rear side 34 of product packages 30, 30a also include one or more ridges 44, 45 extending from the respective front side 32 and rear side 34, which can be used as a design factor in controlling the stiffness of product holder 30. Ridges traditionally used for stiffening blister packages may be used in the present invention to further provide support for engagement elements 40, 41. Engagement elements 40, 41 are therefore formed as part of their respective ridges 44, 45 and are located on portions of ridges 44, 45 which extend the furthest from front side 32 and rear side 34, respectively. Ridges 44, 45 are typically located proximally to a periphery of their respective front side 32 or rear side 34, and may further extend around the entire periphery of their respective front side 32 and rear side 34, as shown. Further, ridges 44, 45 on both front side 32 and rear side 34 may be complementary to each other so that they abut the complementary ridges of an adjacent located product package. As mentioned above, although ridges 44, 45 are shown on both front side 32 and rear side 34, respectively, the present invention may be practiced with ridges located simply on either the front side or rear side.

[0036] The sealed peripheral edge 38 necessarily extends outwardly beyond the ridges 44, 45 and prevents upright stability of the product package 30 on a flat surface, thereby limiting display options of the advertising material on front side 32. This is due to the construction of typical blister packs with a sealed peripheral edge, and it applies to all blister packs constructed in this manner. Some blister packs are formed from a single piece of plastic which is folded in the middle to form a flat bottom in a more complicated packaging process. Although such blister packs are not necessarily in need of greater vertical stability for display purposes, the engagement elements of the present invention may be used in this version to provide additional stability.

[0037] Ridges 44, 45 are further adapted to allow manual access between adjacent located product packages 30 engaged by interface members 42, 43. For this purpose, one or more ridges 44 may be constructed to extend less of a distance from front side 32 than ridges 45 extend from rear side 34. In particular, ridge 44a, extending from the top of front side 32 is constructed to leave space 52 (FIG. 5) between itself and an adjacent ridge 45 of an adjacent product package 30a. The presence of space 52 allows customers to insert their hand between product packages 30 to thereby leverage a product package 30a from an adjacent product package 30b when located in a product display. Whereas package stiffness is used to maintain the cooperative orientation of interface members 42, 43, manual insertion, which causes package flexure may be used to relax that cooperative orientation.

[0038] Ridges 44, 45 typically provide some stiffness to blister packages 30, 30a, and the reduced extension of ridge 44a may be used for the purpose of allowing more flexibility at that particular point on product package 30 to thereby enhance disengagement between interface members of adjacent located and engaged product packages 30. Likewise, even without the use of ridges 44, 45 the blister packages of the present invention may be designed to enhance flexibility at a particular point to more readily allow such product disengagement. Such flexibility might be enhanced in a lateral direction of the product package but not a vertical direction, so that the vertical strength of the product package is maintained to support vertical stacking of product packages.

[0039] FIG. 5 shows a multiplicity of adjacent located and interconnected product packages 30 forming a display 50. Engagement elements 40, 41 interconnect adjacent product packages 30 and thereby provide vertical stability for such interconnected product packages 30 and proper display of front side 32. The formation of ridges 44, 45 allows room for manual insertion between product packages 30 into spaces 52 to enable a person to conveniently remove one or more of product packages 30 from the display. Interconnected in this manner, product packages 30 do not need further support for display purposes.

[0040] FIG. 6 shows another manner of display 50 for a multiplicity of product packages 30 as might be preferred by some retailers. In display 50, the multiplicity of product packages 30 is shown located in a shallow tray 54. Containment in tray 54 may be more convenient for handling by some retailers. Unlike tray 20 (FIG. 2), because product packages 30 have vertical stability, tray 54 does not need the slots 22 used in tray 20.

[0041] FIG. 6 demonstrates the benefit of an optional feature of the present invention which allows for the convenient removal of the first individual package 30a from tray 54. Referring back to FIG. 4, engagement means 41 located on rear side 34 are shown to have interface members 43 which face generally downwardly from the main body of product package 30a. In this manner, the removal of product package 30a from tray 54 may be readily accomplished. Manual insertion behind package 30a at space 52 causes separation of the upper portion of package 30a from the remaining packages in tray 54. This is followed by upward movement of product package 30a and the ready disengagement of interface members 43 from corresponding interface members 42 at the lower end of package 30a.

[0042] FIG. 7 shows another display 56 of two groups 57, 58 of interconnected product packages 30, with group 57 stacked on top of interconnected group 58 as enabled by the present invention. The interconnection of packages 30 whereby not only provides vertical stability for groups of individual packages 30, but also provides sufficient strength to allow such stacking of multiple groups 57, 58 of packages 30. In this manner, interconnected groups 57, 58 may be
Stacked into a shipping carton 60 (shown in phantom), and portions of carton 60 may simply be cut away for display purposes, as shown. Thus, retailers having larger shelving, as in the case of retail clubs, may readily customize the height of a display of product packages 30 to properly fit within their own shelves by appropriately stacking groups of product packages 30. Alternatively, the cohesive groups 57, 58 of product packages may be quickly and efficiently removed from a shipping container for easy arrangement with a wider variety of display devices, including both shelves and hooks.

[0043] FIGS. 8 and 9 are enlargements of individual engagement elements 40, 41, respectively, having their respective interface members 42, 43. Engagement elements 40, 41 show contour lines to more properly demonstrate the nature of interface members 42, 43, respectively. Interface members 42, 43 are shown to have a slightly canted angle 62, 63 respectively, which canted angles 62, 63 face slightly towards their own respective packages as shown in FIG. 4. and thereby maintain engagement with a composite interface member. In one embodiment the angle of cant is approximately 2.5°-3°. Interface members 42 are formed as a surface facing generally away from peripheral edge 38, and interface members 43 are formed as a surface facing generally towards peripheral edge 38.

[0044] FIG. 10 shows a further embodiment of the present invention wherein product packages 70 include separate ridges 72, 73 and different engagement elements 74, 75, located on their respective front side 78 and rear side 79. Engagement means 74, 75 are shown to have interface members 76, 77, respectively, which are more planar in shape than interface members 42, 43 (FIG. 4). Interface members 76, 77 are canted in a similar manner to interface members 42, 43, thereby facing slightly towards their respective product package 70. Interface members 76, 77 are cooperatively arranged on their respective front side 78 and rear side 79 to provide engagement with an adjacent located product package. As shown, front side 78 includes ridges 72, which are oriented vertically, and rear side 79 includes ridges 73 which are horizontally oriented. Both ridges 72 and 73 are arranged to provide stiffness to their respective engagement elements 74, 75.

[0045] FIG, 11 shows a group 80 of interconnected packages 70 as it could be used for display purposes. Display group 80 demonstrates a similar spacing 82 for manual insertion between adjacent product packages 30, which spacing 82 is provided by the arrangement of ridges 72, 73.

[0046] FIG. 12 shows a further embodiment of the present invention in the form of product packages 90 having engagement elements 92, 93 with their respective interface members 94, 95 respectively. Thus, the engagement elements of the present invention may be used without the necessity of additionally forming ridges in the product package. It is known that many things contribute to the stiffness of blister packs, such as the thickness of the plastic used, the size of the package, and the enclosed contents, and therefore, the use of ridges is not always required.

[0047] FIG. 13 shows a further embodiment of the present invention as a single sided product holder 100, which may be formed from a single piece of plastic. Single sided product holders are generally known in the industry and are typically combined with a piece of cardboard having display material and adapted to affixed a product to the respective holder.

[0048] Product holder 100 includes one or more engagement elements 102 of the present invention. Engagement elements 102 are formed with a universal shape adapted for self-mating between adjacentlly located product holders 100. In this manner, product holders 100 can be interconnected by moving them together along dotted lines 103, 104. Such mutual engagement between product holders 100 is demonstrated in FIG. 14, which is a representative top view of two engaged product holders 100a, 100b generally taken along phantom section line 106 of FIG. 12. Engagement elements 102 generally include a distal end 10 and a proximal end 112, which are shaped to provide self-engagement between a distal end 110 and a proximal end 112 of an adjacentlly located product holder 100. In the case of a cardboard backing 114 used in combination with a product holder 100, cardboard backing 114 would include cutout 116 to allow for the insertion of a distal end 110 on one product holder 110 a into a proximal end 112 of an adjacent package holder 100. As constructed, the distance 118 between distal end 110 and proximal end 112 controls the overall spacing and product clearance between engaged product holders 100.

[0049] FIG. 15 shows two groups 120, 122 of product holders 100 as they would be mutually engaged and even stacked for a display 123. Mutually engaged product holders 100 would provide spacing 124 to allow manual insertion between adjacentlly engaged product holders 100 and thereby removal of one or more product holders 100 from their respective group 120, 122. Groups 120, 122 are shown stacked as they might be in both a shipping carton 130 (shown in phantom), and subsequently displayed by simple removal of a portion of shipping carton 130 as shown. Although product holders 100 are shown each having two engagement elements 102, it might be more practical, depending upon the application, to use a different number of engagement elements 102, such as a number between one and four.

[0050] As mentioned, the present invention is useful for a wide variety of display purposes and takes advantage of contemporary blister packaging produced by contemporary packaging machinery. The advantages of lower cost blister packaging remain while the display limitations thereof are overcome. Display and stockings costs for such packaging are also reduced.

[0051] The embodiments of the present invention described herein are intended to be taken in an illustrative and not a limiting light. Various modifications and changes may be made to these embodiments by persons skilled in the art without departing from the scope of the invention as described in the appended claims.

What is claimed is:

1. A product holder, comprising:
   a partially rigid structure having a first side adapted for display purposes; and
   engagement means affixed to said structure and adapted for providing upright stability to said product holder for display of said first side by engagement with another adjacentlly located product holder.
2. The product holder of claim 1, wherein said engagement means include one or more interface members adapted to engage an adjacently located product holder.

3. The product holder of claim 2, wherein said interface members are adapted to engage interface members of an adjacently located product holder.

4. The product holder of claim 2, wherein said structure includes a second side opposed to said first side, and further wherein said interface members extend from at least one of said first and second sides.

5. The product holder of claim 4, wherein said interface members are formed as part of a ridge located on at least one said first or second side.

6. The product holder of claim 5, wherein each said ridge is located proximally to a periphery of a respective said first or second side.

7. The product holder of claim 6, wherein said ridge is adapted to allow manual access between engaged product holders that are adjacently located and mutually engaged by said interface members.

8. The product holder of claim 7, wherein said engagement means include a plurality of interface members which are oriented by partial rigidity of said structure to maintain engagement with an adjacentlly located product holder.

9. The product holder of claim 8, wherein said structure is adapted to flex under manual insertion between engaged product holders to enhance disengagement between said interface members of such engaged product holders.

10. The product holder of claim 9, wherein said first and second sides are separately formed and then combined to form a product package.

11. The product holder of claim 4, wherein both said first and second sides include interface members extending therefrom and adapted to engage interface members of adjacentlly located product holders.

12. The product holder of claim 11, wherein each said first and second side includes at least one ridge formed therein and adapted to provide support for said interface members, and further wherein said ridges are adapted to abut ridges of adjacentlly located product holders.

13. The product holder of claim 11, wherein said interface members on each respective said first side and second side are complementary and adapted to only engage said interface members of an adjacentlly located product holder extending from a respective opposite said second or first side of their respective said product holder.

14. The product holder of claim 4, wherein said structure includes a lower end adapted for substantially vertical movement with respect to an adjacentlly located product holder.

15. The product holder of claim 14, wherein one or more said interface members are located at said lower end and are adapted for disengagement by lifting a first said product holder relative to a second said product holder.

16. The product holder of claim 15, wherein said interface members located at said lower end extend from a rear side of said product holder.

17. The product holder of claim 1, wherein said engagement means are oriented by partial rigidity in said structure to maintain engagement with an adjacentlly located product holder.

18. The product holder of claim 17, wherein said structure is adapted to flex to enhance disengagement between adjacentlly located product holders engaged by said interface members.

19. The product holder of claim 17, wherein said interface members are spaced around and proximal to a periphery of their respective said product holders.

20. The product holder of claim 19, wherein said container is adapted for vertical rigidity to support the weight of additional product holders stacked thereon.

21. A product package, comprising:

a partially rigid structure having a front side adapted for display purposes and a rear side opposed to said front side; and

at least one interface member located on each said front and rear side and adapted for providing upright stability to said product package for display of said front or rear side by engagement with another adjacentlly located product package.

22. The product package of claim 21, wherein said interface members are oriented by partial rigidity of said structure to maintain engagement with interface members of an adjacentlly located product package.

23. The product package of claim 22, wherein said structure is adapted to allow manual access between engaged product packages that are adjacentlly located and mutually engaged by said interface members, and further wherein said product package is adapted to flex under manual insertion between engaged product packages to enhance disengagement between said interface members of such engaged product packages.

24. A method for packaging products, comprising the steps of:

enclosing products in a plurality of product packages, wherein each product package includes a partially rigid structure with a first side adapted for display purposes, and engagement means for providing upright stability for display of said first side by engagement with another adjacentlly located product package; and

engaging said plurality of product packages together by said engagement means.

25. The method of claim 24, wherein the step of engaging said product packages causes said first side of all engaged product packages to face in the same direction.

26. The method of claim 24, further comprising locating engaged product packages from said step of engaging in a single shipping container.

27. The method of claim 24, further comprising stacking a plurality of groups of engaged product packages from said step of engaging in a single shipping container.

28. The method of claim 27, wherein said plurality of groups of engaged product packages stacked in said single shipping container are adapted for display by removal of a portion of said single shipping container.
29. A product display system, comprising a plurality of product packages each including a partially rigid structure having a first side adapted for display purposes and engagement means for providing upright stability for display of said first side by engagement with another adjacent disposed product package, wherein said plurality of packages are engaged together by said engagement means.

30. The product display system of claim 29, wherein said first side of said plurality of product packages face in the same direction.

31. The product display system of claim 29, further comprising a second plurality of engaged product packages stacked on top of the first said plurality of product packages.

32. The product packaging system of claim 31, wherein said first said and second plurality of engaged product packages are stacked in a single container for shipping and are adapted for display by removal of part or all of said single container.