ABSTRACT

A package for containing cylindrical items comprising a backing board having a front and rear face and an item holder. The item holder is configured to retain the cylindrical items therein and is connected to the backing board and extending forwardly from the front face. The item holder includes a front side, a rear side, a first side and a second side, with the front side of the item holder having a front surface and a rear surface. The rear surface faces the front face and the front surface faces away from the backing board. The rear surface of the item holder includes at least one ramp extending towards the front face. The at least one ramp is configured to roll the cylindrical items in the item holder towards the first side of the item holder when the front side of the item holder is placed on a horizontal surface.
BLISTER PACKAGE WITH THUMB RECESS AND SELF DISPENSING FEATURES

FIELD OF THE INVENTION

[0001] The present invention concerns packaging, and more particularly relates to packaging for batteries.

BACKGROUND OF THE INVENTION

[0002] Electrochemical cells (i.e., batteries) are commonly employed to supply voltage for electrically operated devices, particularly for portable electrically operated devices. Currently, a number of popular alkaline cells of the generally cylindrical shape are commercially available in industry-recognized, standard sizes, including D-, C-, AA- and AAA-size cells, as well as other sizes and configurations.

[0003] Heretofore, batteries have been shipped and displayed in stores in battery packages having a cardboard backing and a battery receptacle portion holding the batteries. The cardboard backing has been a single board or card. The single board is typically rectangular, with edges of the board being adjacent the periphery of the battery receptacle portion. Information about the manufacturer of the batteries and the typical devices for use with the batteries are typically located on the rear face of the board.

[0004] Accordingly, an improved battery package is desired.

SUMMARY OF THE INVENTION

[0005] One aspect of the present invention is to provide a package for containing cylindrical items comprising a backing board and an item holder. The backing board has a front face and a rear face. The item holder is connected to the backing board and extends forwardly from the front face of the backing board. The item holder is configured to retain the cylindrical items therein. The item holder includes a front side, a rear side, a first side and a second side. The front side of the item holder includes a front surface and a rear surface, with the rear surface facing the front face of the backing board and the front surface facing away from the backing board. The rear surface of the front side of the item holder includes at least one ramp extending towards the front face of the backing board. The at least one ramp is configured to roll the cylindrical items in the item holder in a direction from the second side towards the first side of the item holder when the front side of the item holder is placed on a horizontal surface.

[0006] Another aspect of the present invention is to provide a battery package comprising a backing board, a battery holder and cylindrical batteries. The backing board has a front face and a rear face. The battery holder is connected to the backing board and extends forwardly from the front face of the backing board. The battery holder includes a front side, a rear side, a first side and a second side. The cylindrical batteries are located in the battery holder. The front side of the battery holder includes a front surface and a rear surface, with the rear surface facing the front face of the backing board and the front surface facing away from the backing board. The rear surface of the front side of the battery holder includes at least one ramp extending towards the front face of the backing board. The at least one ramp rolls the batteries in the battery holder in a direction from the second side towards the first side of the battery holder when the front side of the battery holder is placed on a horizontal surface.

[0007] Yet another aspect of the present invention is to provide a method of dispensing batteries comprising providing a backing board having a front face and a rear face and connecting a battery holder to the backing board. The battery holder includes a front side, a rear side, a first side and a second side. The front side of the battery holder has a front surface and a rear surface, with the rear surface facing the front face of the backing board and the front surface facing away from the backing board. The method further includes extending the battery holder forwardly from the front face of the backing board and placing cylindrical batteries in the battery holder. The method also includes providing the rear surface of the front side of the battery holder with at least one ramp extending towards the front face of the backing board. The method also includes positioning the front side of the battery holder in a horizontal orientation and rolling the batteries in the battery holder on the at least one ramp in a direction from the second side towards the first side of the battery holder.

[0008] Another aspect of the present invention is to provide a battery package comprising a battery holding compartment and cylindrical batteries in the battery holding compartment. The battery holding compartment has a top wall, a bottom wall, a first side wall and a second side wall. The bottom wall of the battery holding compartment has at least one ramp extending towards the top wall of the battery holding compartment. The at least one ramp has an upper end adjacent the second side wall and a lower end adjacent the first side wall. The top wall of the battery holding compartment has an opening therethrough, with the opening being located above the lower end of the at least one ramp. The at least one ramp rolls the cylindrical batteries in the battery holding compartment from the upper end to the lower end, whereby the batteries can be easily removed from the battery holding compartment through the opening.

[0009] Yet another aspect of the present invention is to provide a method of dispensing batteries comprising providing a battery holding compartment having a top wall, a bottom wall, a first side wall and a second side wall. The method also includes placing cylindrical batteries in the battery holding compartment. The method further includes providing the bottom wall of the battery holding compartment with at least one ramp extending towards the top wall of the battery holding compartment, with the at least one ramp having an upper end adjacent the second side wall and a lower end adjacent the first side wall. The method also includes providing the top wall of the battery holding compartment with an opening therethrough, locating the opening above the lower end of the at least one ramp, and rolling the batteries in the battery holding compartment on the at least one ramp towards the upper end to the lower end.

[0010] These and other features, advantages, and objects of the present invention will be further understood and appreciated by those skilled in the art by reference to the following specification, claims and appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is an isometric rear view of a package of the present invention.
FIG. 2 is an isometric exploded rear view of the package of the present invention.

FIG. 3 is an exploded side view of the package of the present invention.

FIG. 4 is a rear view of the package of the present invention in a dispensing position.

FIG. 5 is an isometric view of an item holder of the package of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

For purposes of description herein, the terms "upper," "lower," "right," "left," "front," "vertical," "horizontal," and derivatives thereof shall relate to the invention as orientated in FIG. 1. However, it is to be understood that the invention may assume various alternative orientations, except where expressly specified to the contrary. It is also to be understood that the specific devices and processes illustrated in the attached drawings, and described in the following specification are simply exemplary embodiments of the inventive concepts defined in the appended claims. Hence, specific dimensions and other physical characteristics relating to the embodiments disclosed herein are not to be considered as limiting, unless the claims expressly state otherwise.

The reference number 10 (FIGS. 1-5) generally designates a package for containing cylindrical items of the present invention. The packing 10 comprises a backing board 12 and an item holder 14. The backing board 12 has a front face 16 and a rear face 18. The item holder 14 is connected to the backing board 12 and extending forwardly from the front face 16 of the backing board 12. The item holder 14 is configured to retain the cylindrical items 20 therein. The item holder 14 includes a front side 22, a rear side 24, a first side 26 and a second side 28. The front side 22 of the item holder 14 has a front surface 30 and a rear surface 32. The rear surface 32 faces the front face 16 of the backing board 12 and the front surface 30 faces away from the backing board 12. The rear surface 32 of the front side 22 of the item holder 14 includes at least one ramp 34 extending towards the front face 16 of the backing board 12. The at least one ramp 34 is configured to roll the cylindrical items 20 in the item holder 14 in a direction from the second side 28 towards the first side 26 of the item holder 14 when the front side 22 of the item holder 14 is placed on a horizontal surface.

In the illustrated embodiment, the package 10 is configured to have cylindrical items 20 placed therein. Preferably, the cylindrical items 20 are batteries. The batteries can be any of a number of popular alkaline cells of the generally cylindrical shape commercially available in industry-recognized, standard sizes, including C-, AA-, AAA-, and AAAA-size cells. Moreover, it is contemplated that instead of batteries, the package 10 can hold any object having a cylindrical shape therein.

The illustrated backing board 12 has a front face 16 and a rear face 18, with the item holder 14 extending from the front face 16. The backing board 12 is preferably a substantially rectangular piece of cardboard. However, it is contemplated that the backing board 12 could have other shapes and could be made out of any material. The backing board 12 preferably includes a perforation 38 extending across the backing board 12 and dividing the backing board 12 into a first section 40 and a second section 42. The first section 40 can include a hanger hole 36 therethrough for allowing the package 10 to be hung from a wire typically used at the point of sale of the package 10. The illustrated second section 42 of the backing board 12 includes a finger aperture 44 adjacent the perforation 38 for allowing a user of the package to place their finger into the finger aperture 44 and pull the first section 40 away from the second section 42 and the item holder 14 (see FIG. 4). It is contemplated, however, that the finger aperture 44 could be in the first section 40.

In the illustrated example, the item holder 14 is configured to have the cylindrical items 20 placed therein. The item holder 14 is preferably made of a translucent or transparent thermoformed plastic material to allow the cylindrical items 20 therein to be easily seen. However, it is contemplated that the item holder 14 could be made of any material and/or could be opaque. The item holder 14 includes a rim 46 located at the rear side 24 of the item holder 14. A first side wall 48 at the first side 26 of the item holder 14 and a second side wall 50 at the second side 28 of the item holder 14 extends forwardly from the rim 46. The item holder 14 also includes a third side wall 52 and a fourth side wall 54, both extending between the first side wall 48 and the second side wall 50. Preferably, the front face 16 of the backing board 12 is adhered to the rim 46 to connect the backing board 12 to the item holder 14. However, it is contemplated that the item holder 14 could be connected to the backing board 12 in any manner. For example, the first side wall 48, the second side wall 50, the third side wall 52 and/or the fourth side wall 54 could include flanges that extend around the backing board 12 to be connected to the rear face 18 of the backing board 12. The rim 46 preferably includes a hanger hole 58 aligned with the hanger hole 36 in the backing board 12 to allow the package 10 to be hung from the wire as discussed above.

The illustrated item holder 14 includes a front wall 56 connected to the first side wall 48, the second side wall 50, the third side wall 52 and the fourth side wall 54 at the front side 22 of the item holder 14. The front wall 56 includes the rear surface 32 facing the front face 16 of the backing board 12 and the front surface 30 facing away from the backing board 12. The at least one ramp 34 extends from the rear surface 32 of the front wall 56. The at least one ramp 34 includes an upper end 60 adjacent the second side wall 50 and a lower end 62 adjacent the first side wall 48. Although the at least one ramp 34 is illustrated as being two ramps 34, it is contemplated that any number of ramps 34 could be used. Preferably, the ramps 34 are formed with the item holder 14 is molded. However, it is contemplated that the ramps 34 could be separate elements connected to the rear surface 32 of the front wall 56 of the item holder 14.

In use, the at least one ramp 34 rolls the cylindrical items 20 in the item holder 14 from the second side 28 towards the first side 26 when the front surface 30 of the item holder 14 is orientated horizontally. In the illustrated example, the first section 40 of the backing board 12 forms an opening 70 in the package 10 when the first section 40 is removed from the second section 42 of the backing board 12 and the item holder 14. The opening 70 is located above the lower end 62 of the at least one ramp 34 when the front
Surface 30 of the item holder 14 is orientated horizontally. Therefore, the cylindrical items 20 can easily be removed from the package 10 through the opening 70. When one cylindrical item 20 is removed from the package 10, the at least one ramp 34 will roll at least one of the remaining cylindrical items 20 in the package 10 into a position under the opening 70 to allow another cylindrical item 20 to be easily removed from the package 10 through the opening 70.

[0023] In the illustrated embodiment, the first side wall 48 of the item holder 14 includes a thumb well 80 to assist in removing the cylindrical items 20 from the package 10. The thumb well 80 includes a centrally located annular groove 82 and a pair of side curved grooves 84. The centrally located annular groove 82 allows a user of the package 10 to place a thumb (or other digit) therein to help scoop out one of the cylindrical items 20 from the package 10.

[0024] Moreover, the foregoing detailed description is considered that of a preferred embodiment only, and the particular shape and nature of at least some of the components in this embodiment are at least partially based on manufacturing advantages and considerations as well as on those pertaining to assembly and operation. Modifications of this embodiment may well occur to those skilled in the art and to those who make or use the invention after learning the nature of this preferred embodiment, and the invention lends itself advantageously to such modification and alternative embodiments. Therefore, it is to be understood that the embodiment shown in the drawings and described above is provided principally for illustrative purposes and should not be used to limit the scope of the invention.

What is claimed is:

1. A package for containing cylindrical items comprising:
   a backing board having a front face and a rear face; and
   an item holder connected to the backing board and extending forwardly from the front face of the backing board, the item holder being configured to retain the cylindrical items therein, the item holder including a front side, a rear side, a first side and a second side;
   the front side of the item holder having a front surface and a rear surface, the rear surface facing the front face of the backing board and the front surface facing away from the backing board;
   the rear surface of the front side of the item holder including at least one ramp extending towards the front face of the backing board, the at least one ramp being configured to roll the cylindrical items in the item holder in a direction from the second side towards the first side of the item holder when the front side of the item holder is placed on a horizontal surface.

2. The package of claim 1, wherein:
   the backing board includes a perforation for separating the backing board into a first section and a second section.

3. The package of claim 2, wherein:
   the first section is configured to be removed from the second section and the item holder to provide an opening for removal of cylindrical items in the item holder.

4. The package of claim 2, wherein:
   the backing board includes a hole adjacent the perforation for easy removal of the first section from the second section.

5. The package of claim 1, wherein:
   the at least one ramp comprises at least two ramps.

6. The package of claim 1, wherein:
   the first end of the item holder includes a thumb well for easily grasping the cylindrical items to be placed in the item holder.

7. A battery package comprising:
   a backing board having a front face and a rear face;
   a battery holder connected to the backing board and extending forwardly from the front face of the backing board, the battery holder including a front side, a rear side, a first side and a second side; and
   cylindrical batteries in the battery holder;
   the front side of the battery holder having a front surface and a rear surface, the rear surface facing the front face of the backing board and the front surface facing away from the backing board;
   the rear surface of the front side of the battery holder including at least one ramp extending towards the front face of the backing board, the at least one ramp rolling the batteries in the battery holder in a direction from the second side towards the first side of the battery holder when the front side of the battery holder is placed on a horizontal surface.

8. The battery package of claim 7, wherein:
   the backing board includes a perforation for separating the backing board into a first section and a second section.

9. The battery package of claim 8, wherein:
   the first section is configured to be removed from the second section and the item holder to provide an opening for removal of the cylindrical batteries in the battery holder.

10. The battery package of claim 8, wherein:
    the backing board includes a hole adjacent the perforation for easy removal of the first section from the second section.

11. The battery package of claim 7, wherein:
   the at least one ramp comprises at least two ramps.

12. The battery package of claim 7, wherein:
    the first end of the battery holder includes a thumb well for easily grasping the cylindrical batteries in the battery holder.

13. A method of dispensing batteries comprising:
    providing a backing board have a front face and a rear face;
    connecting a battery holder to the backing board, the battery holder including a front side, a rear side, a first side and a second side, the front side of the battery holder having a front surface and a rear surface, the rear surface facing the front face of the backing board and the front surface facing away from the backing board;
    extending the battery holder forwardly from the front face of the backing board;
    placing cylindrical batteries in the battery holder;
    providing the rear surface of the front side of the battery holder with at least one ramp extending towards the front face of the backing board;
positioning the front side of the battery holder in a horizontal orientation; and
rolling the batteries in the battery holder on the at least one ramp in a direction from the second side towards the first side of the battery holder.

14. The method of dispensing batteries of claim 13, further including:
   perforating the backing board; and
   separating the backing board into a first section and a second section.

15. The method of dispensing batteries of claim 14, further including:
   making a hole in the backing board adjacent the perforation; and
   wherein separating the backing board includes placing a finger through the hole and grasping the first section of the backing board.

16. The method of dispensing batteries of claim 13, further including:
   removing at least a portion of the backing board to form an opening; and
   removing the batteries from the battery holder through the opening.

17. The method of dispensing batteries of claim 13, wherein:
   the at least one ramp comprises at least two ramps.

18. The method of dispensing batteries of claim 13, further including:
   providing the first end of the battery holder with a thumb well; and
   removing the batteries from the battery holder by placing a finger in the thumb well.

19. A battery package comprising:
   a battery holding compartment, the battery holding compartment having a top wall, a bottom wall, a first side wall and a second side wall; and
   cylindrical batteries in the battery holding compartment;
   the bottom wall of the battery holding compartment having at least one ramp extending towards the top wall of the battery holding compartment, the at least one ramp having an upper end adjacent the second side wall and a lower end adjacent the first side wall;
   the top wall of the battery holding compartment having an opening therethrough, the opening located above the lower end of the at least one ramp;
   the at least one ramp rolling the cylindrical batteries in the battery holding compartment from the upper end to the lower end, whereby the batteries can be easily removed from the battery holding compartment through the opening.

20. The battery package of claim 19, wherein:
   the top wall includes a perforation for separating the top wall into a first removable section defining the opening and a second section.

21. The battery package of claim 20, wherein:
   the top wall includes a hole adjacent the perforation for easy removal of the first section from the second section.

22. The battery package of claim 19, wherein:
   the at least one ramp comprises at least two ramps.

23. The battery package of claim 19, wherein:
   the first side wall of the battery holding compartment includes a thumb well for easily grasping the cylindrical batteries in the battery holding compartment.

24. A method of dispensing batteries comprising:
   providing a battery holding compartment having a top wall, a bottom wall, a first side wall and a second side wall;
   placing cylindrical batteries in the battery holding compartment;
   providing the bottom wall of the battery holding compartment with at least one ramp extending towards the top wall of the battery holding compartment, with the at least one ramp having an upper end adjacent the second side wall and a lower end adjacent the first side wall;
   providing the top wall of the battery holding compartment with an opening therethrough;
   locating the opening above the lower end of the at least one ramp;
   rolling the batteries in the battery holding compartment on the at least one ramp towards the upper end to the lower end.

25. The method of dispensing batteries of claim 24, further including:
   perforating the top wall; and
   separating the top wall into a first section defining the opening and a second section.

26. The method of dispensing batteries of claim 25, further including:
   making a hole in the top wall adjacent the perforation; and
   wherein separating the top wall includes placing a finger through the hole and grasping the first section of the top wall.

27. The method of dispensing batteries of claim 24, further including:
   removing the batteries from the battery holding compartment through the opening.

28. The method of dispensing batteries of claim 24, wherein:
   the at least one ramp comprises at least two ramps.

29. The method of dispensing batteries of claim 24, further including:
   providing the first end of the battery holding compartment with a thumb well; and
   removing the batteries from the battery holding compartment by placing a finger in the thumb well.

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