A novel razor cartridge package suitable for protectively storing a razor cartridge is disclosed. The package includes two or more connected containers with a cover for covering the top perimeter of each container. The cover may be plastic, flexible and adhesively sealed to the container such that a user can peel the sheet back to open and access an individual razor cartridge. It may also be resealable. The covers may have a cover sheet separability line (e.g., perforations) between them to allow for easy peeling. The connected containers may or may not be removable from one another and if removable, may be secured together via a container separability line, allowing a user to pull off one container, having one cartridge inside, from the package at a time. The container and cover sheet separability lines may be aligned and may or may not be formed at the same time.
DISPENSER PACKAGE WITH PROTECTIVE COVERS

FIELD OF THE INVENTION

[0001] This invention relates to a razor cartridge package suitable for protectively storing multiple razor cartridges.

BACKGROUND OF THE INVENTION

[0002] Current razor cartridge packages include plastic containers with a storage region for each cartridge. Individually sealed containers for shaving cartridges are known in the prior art; for instance, U.S. Pat. Nos. 6,499,595 and 6,886,690. These types of individual containers are widely used for female razor cartridges.

[0003] There is a need to provide a unique package and method of packaging suitable for both male and female razor cartridges that provide multiple connected containers while also enabling the consumer to be able to individually open, use, store, and transport one razor cartridge at a time while also providing a level of mechanical and environmental protection for each cartridge.

[0004] There is also a need for such a razor cartridge package to be easy to open and compact.

SUMMARY OF THE INVENTION

[0005] In accordance with the present invention, a novel razor package includes a plurality of connected containers wherein each of the plurality of containers is capable of storing at least one razor cartridge and at least one cover removable attached to a top perimeter of each of the connected containers. The cover can be plastic, flexible and adhesively sealed onto the top perimeters of the containers. In this way, the cover is capable of being peeled off by a user. The cover may include a cover separability line such as perforations and thus, may be peeled off at the perforations. The cover may be transparent, opaque, colored or any combination thereof. The cover may include a tab at one end or outside corner of each container. In one aspect, the cover can be resealable at the top perimeter of each of the containers. The cover may cover the container via mechanical means. By providing covers, environmental elements cannot enter the containers. The cover may encompass or cover two or more of cartridges by covering two or more containers. The containers may be made of a polymeric material or polypropylene material.

[0006] The containers may be removable connected or not. If removable connected, they may be connected at a container separability line which may be a mechanical interconnection. In addition, the containers may be transparent, opaque, colored or any combination thereof. The containers and the covers may be integrated.

[0007] In one aspect, the method of making a razor cartridge package includes molding a plurality of containers from a polypropylene material, placing a razor cartridge within a storage region of each of the containers and sealing a top perimeter of each of the containers with a plastic cover sheet.

[0008] Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods and materials similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods and materials are described below. All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the present specification, including definitions, will control. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

[0009] Other features and advantages of the invention will be apparent from the following detailed description, and from the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] While the specification concludes with claims particularly pointing out and distinctly claiming the subject matter which is regarded as forming the present invention, it is believed that the invention will be better understood from the following description which is taken in conjunction with the accompanying drawings in which like designations are used to designate substantially identical elements, and in which:

[0011] FIG. 1 is a perspective view of a razor cartridge package of the present invention with one cover in a partially opened condition showing a razor cartridge inside the partially opened container.

[0012] FIG. 2 is a perspective view of a razor cartridge package in accordance with another embodiment of the present invention with one cover in a partially opened condition showing a razor cartridge inside the partially opened container.

[0013] FIG. 3 is a perspective view showing a first container being removed from a second container in accordance with the present invention.

[0014] FIG. 4 is a side view of a razor cartridge package in accordance with the present invention.

[0015] FIG. 5 is a perspective view of an alternate embodiment of a razor cartridge package in accordance with the present invention.

[0016] FIG. 6 is a perspective view of yet another alternate embodiment of a razor cartridge package in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0017] The invention relates to novel razor cartridge packaging which includes connected plastic containers having individual removable plastic covers. Each container is capable of storing at least one razor cartridge and at least one cover is removable attached to a top perimeter of each of the connected containers.

[0018] Referring now to FIG. 1, in accordance with an embodiment of the present invention, there is shown a quadruple razor cartridge package 10 including formed or molded plastic first, second, third and fourth containers, 12a, 12b, 12c, and 12d, respectively, covers or cover sheets 14a, 14b, 14c, 14d for each container respectively capable of covering razor cartridges 16a, 16b, 16c, 16d, respectively which are stored within storage regions inside containers 12a, 12b, 12c, and 12d, respectively.

[0019] Containers 12a, 12b, 12c, and 12d may be substantially identical to each other. Containers 12a, 12b, 12c, and 12d may also assist in protecting the razor cartridges both mechanically and environmentally as will be described in more detail below.

[0020] Covers 14a, 14b, 14c, 14d assist in protecting the enclosed razor cartridges from the environment and allow for each individual razor cartridge to be opened individually. The
covers may each comprise a separate tab, notch, clip or any type of extension 11a, 11b, 11c, 11d from the covers on one end or outside corner of the respective cover or container.

[0021] As shown in FIG. 1, by peeling back the cover sheets 14a, 14b, 14c, 14d (by use of the tabs 11a, 11b, 11c, 11d if present) a consumer is able to individually open the containers 12a, 12b, 12c, 12d to access each razor cartridge as it is needed. The razor cartridges are stored such that the blade cutting edge portion (not shown) of each razor cartridge is not at the area of access so as to protect a consumer from unintended contact with the cutting edges of the razor blades.

[0022] The shape of each of the containers 12a, 12b, 12c, 12d outlines the general shape of a razor cartridge. These shapes may be wider than the actual periphery of the razor cartridge within the storage regions such that a consumer can easily access the cartridge once the cover is peeled back or taken off.

[0023] Covers 14a, 14b, 14c, 14d may be individually adhesively sealed with a material around the top periphery of containers 12a, 12b, 12c, 12d of package 10 via heat and pressure or via any other suitable manner. In one aspect of the present invention, there may be separability lines 13a, 13b, 13c between the adjacent covers, as shown in FIG. 1. For instance, separability line 13a is disposed between covers 14a and 14b; separability line 13b is located between covers 14b and 14c; and separability line 13c is located between covers 14c and 14d. These separability lines may include perforations or continuous slits or any other means to allow for easy removal and to provide the peeling off of one cover at a time.

[0024] The containers of the present invention may be covered by one cover or cover sheet across the entire package 10 where the cover peel back may still occur to expose individual cartridges at a time along separability lines 13a, 13b, 13c which again may include perforations or continuous slits. An embodiment of the present invention depicting one cover sheet is shown in FIG. 4.

[0025] Covers 14a, 14b, 14c, and 14d may be made of any generally flexible, impermeable material, multilayered laminate or any type of plastic, such that each cover or cover sheet prevents the contents of the container from coming out while also preventing environmental elements from entering the container. Hence, a cardboard type material for the cover sheet might not serve this purpose. The covers should desirably be made of a sturdy and robust material so as to also prevent any stabs or jabs from puncturing or making holes in the covers (e.g., cover sheets or cover seal).

[0026] In another embodiment of the present invention, the dispenser 20 shown in FIG. 2 includes covers 24a, 24b, 24c, and 24d which may be made of a hard, less flexible plastic while still providing access to each individual cartridge (cartridge 16a shown exposed). The covers in FIG. 2, depending on the material they are made from, may or may not be capable of being peeled back or off as in FIG. 1. If the covers are of a hard plastic as shown in FIG. 2 they may be lifted off or opened (e.g., like a door) rather than peeled off. They may be lifted off from one or more sides and may be mechanically or otherwise attached to the individual containers 21a-d; for instance via hinges 23a-d. As shown in FIG. 2, the covers 24a-d have tabs or clips 22a-d which may be used by the consumer to lift off the cover.

[0027] The covers of FIGS. 1 and 2 may or may not be taken off completely. Desirably however the opening provided by removing or lifting the cover (whether capable of coming completely off the container or not) should be adequate to allow access to the razor cartridge disposed inside.

[0028] Additionally, it is contemplated in the present invention that a less flexible, but not very hard plastic, may be used as a cover material, and as such, the covers in FIG. 2 may be formed of such a plastic allowing for the capability of being adhesively sealed. As discussed above in conjunction with FIG. 1, it follows that therefore a peel back may occur for removal that there may or may not be separability lines (e.g., perforations or slits).

[0029] The covers or cover sheets of the present invention may be transparent, opaque, colored or any combination thereof. With a transparent or partially transparent cover sheet, a user is able to view the razor product at the point of purchase while still providing mechanical and environmental protection to the cartridge simultaneously.

[0030] In an alternate embodiment of the present invention, it is contemplated that the covers of FIGS. 1 and 2 may be formed such that they reseal or close back down (e.g., reclosable) onto the containers of FIGS. 1 and 2, respectively, as a means of storing the razor cartridge within the package for the next shave if desired. For instance, if a consumer wants to protect the razor cartridge while traveling or when transporting the razor (e.g., to the gym), it may be beneficial for the covers to be reused or closed back down on the individual containers. In this way, the containers are capable of also being used as protective storage for the razor cartridges.

[0031] Thus, it is contemplated in the present invention that an aspect of the tabs (e.g., the underside) 11a, 11b, 11c, 11d or clips 22a, 22b, 22c, 22d may provide a way for tacking the cover sheets 14a, 14b, 14c, 14d or covers 24a, 24b, 24c, 24d back down at each corner or upon any area of the periphery of the container. For instance, the underside of the tabs or clips may have a glue, button, snap, or Velcro® fastener or the tab itself may be substantially a button, snap, or Velcro fastener (not shown).

[0032] The containers in the present invention may be formed or molded using a plastic such as a polypropylene or polyethylene terephthalate glycol (PETG) or any other suitable plastic, elastomer, or derivative thereof. The polypropylene material is generally a thick material and in many instances, thicker than thermoformed PET material and therefore provides both mechanical and environmental protection as described above for the razor cartridges inside the dispenser. A container made of cardboard or paper may not be as effective at protecting mechanical aspects of the razor nor preventing environmental entrants. Accordingly, if the container were made with cardboard it may also need additional materials to make the container more robust, such as combining with plastics or other types of materials.

[0033] The present invention keeps the natural or neutral position of the pivot point and other mechanical attributes intact after the razor cartridge is placed in its individual storage area in the dispenser. The package can sustain significant outside forces, pressure, drops, etc. and will remain intact, as well as inhibit movement of the razor cartridge inside. By keeping the razor cartridge position intact, it is well protected during transport and storage such that the pivot point is not pushed, offset or forced to be disposed in a different position, and does not cause damage. Hence, the razor cartridge is functional and the consumer is not disappointed at the time of use.

[0034] The containers in the present invention may be transparent, opaque, colored or any combination thereof.
With a transparent or partially transparent container, a user is able to view the razor product at the point of purchase while still providing protection to the cartridge.

[0035] FIGS. 1 and 2 of the present invention may have packages that are manufactured or integrally molded as a single component such that the individual containers are attached but are not removable or detachable from each other in that there is no capability to detach or tear-off one from the other.

[0036] In another embodiment of the present invention, as shown in FIG. 3, the connected razor cartridge containers 32a, 32b, 32c, and 32d of package 30 may be removably attached or removably secured to each other along container separability lines 33a, 33b, 33c and 33d located for instance between containers 32a and 32b, 32b and 32c, and 32c and 32d, respectively, as shown in FIG. 3. The container separability lines allow containers to be individually separated or detached from the other containers. For instance, as shown in FIG. 3, a consumer could tear off or separate container 32a from the remaining connected containers 32b, 32c, and 32d of package 30 by detaching container 32a from container 32b at separability line 33a. In this way, a consumer can travel with one container only if desired, leaving the rest of the containers connected and intact for later use.

[0037] The separability lines 33a, 33b, and 33c of one container from the other may be accomplished via mechanical means, such as with interconnections, interlocking arms or ribs, snap-off connections, hinges, pins, or openings, perforations or continuous slits formed via laser cutting or any other methods, all depending on the material and type of containers to be used. For instance, if containers 32a, 32b, 32c, 32d are made of a thicker polypropylene material, separating the containers via perforations, as discussed above with regard to the cover sheet separability lines 13a, 13b, 13c for cover sheets 14a, 14b, 14c, 14d may not be feasible.

[0038] It should be noted that the cover separability lines 13a, 13b, 13c may or may not be formed at the same time or via the same means as the container separability lines 33a, 33b, and 33c. However, in the present invention, the cover sheet separability lines 13a, 13b, 13c may be desirably substantially aligned on top of the container separability lines 33a, 33b, and 33c respectively, as shown in FIG. 4, allowing for a cleaner break or separability of one container from the other.

[0039] FIG. 4 also shows an alternate embodiment of the present invention depicting one cover sheet 34 for covering all the individually connected containers 32a, 32b, 32c, and 32d of package 40.

[0040] Having multiple razor cartridges in a package, though desirable, may present a risk to the pivot position of each cartridge, unless the cartridges, as described herein, are suitably spaced apart. The mechanical protection in the present invention includes protecting the mechanical aspects of the razor cartridge, such as the pivot mechanism and/or leaf springs. For instance, one important mechanical aspect of a non-disposable razor such as the Gillette® Venus® Breeze®, is its pivot point and/or leaf spring mechanism of the cartridge. It is desirable to keep the natural position of the pivot points intact from the time the products are placed in the package, along the shipping path from the manufacturer to the retail store, and finally to the consumer’s home. The natural position is the position of the cartridge pivot point is the position having no pressure or bias. The package of the present invention may sustain significant outside force, pressure, drops, etc. and still remain intact, as well as inhibit movement of the razor cartridge inside. By keeping the razor cartridge intact, it is well protected during transport and storage. If the pivot point is somehow pushed, offset or forced to be disposed in a different position, it may cause the cartridge leaf spring to be compromised or damaged, and hence the razor cartridge may not be functional in turn leading to consumer disappointment at the time of use.

[0041] Additionally, one important environmental aspect considered in the present invention is keeping any soap or lubricant (e.g., “soap wings” attached at top and bottom portions of a cartridge, such as the Gillette Venus® Breeze® cartridge) intact. Again, the packaging has to be able to sustain the environment and any weather related elements such that the soap wings are not compromised. For instance, steam, moisture, humidity and other environmental entrants can significantly affect the character or chemistry of the soap wings.

[0042] With a plurality of containers, the containers may be connected together in any fashion and with any number of containers and covers desired or required. For instance, FIGS. 1-4 described above depict a “serial” type attachment (e.g., four containers in a row) while a “2×2” type cartridge container package 50 shown in FIG. 5 having razor cartridge containers 52a, 52b, 52c, and 52d and a three container package 60 of FIG. 6 with a container 62b opening with cover sheet 64b on an opposing side of the other containers 62a and 62c are also contemplated in the present invention.

[0043] The dimensions and values disclosed herein are not to be understood as being strictly limited to the exact numerical values recited. Instead, unless otherwise specified, each such dimension is intended to mean both the recited value and a functionally equivalent range surrounding that value. For example, a dimension disclosed as “40 mm” is intended to mean “about 40 mm”.

[0044] All documents cited in the Detailed Description of the Invention are, in relevant part, incorporated herein by reference; the citation of any document is not to be construed as an admission that it is prior art with respect to the present invention. To the extent that any meaning or definition of a term in this written document conflicts with any meaning or definition of the term in a document incorporated by reference, the meaning or definition assigned to the term in this written document shall govern.

[0045] While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications can be made without departing from the spirit and scope of the invention. It is therefore intended to cover in the appended claims all such changes and modifications that are within the scope of this invention.

What is claimed is:
1. A package for razor cartridges comprising:
a plurality of connected containers wherein each of said plurality of containers is capable of storing at least one razor cartridge; and
at least one cover removably attached to top perimeter of each of said plurality of connected containers.
2. The package of claim 1 wherein said cover comprises plastic.
3. The package of claim 1 wherein said cover is adhesively sealed onto said top perimeters.
4. The package of claim 1 wherein said cover comprises a cover separability line.
5. The package of claim 4 wherein said cover separability line comprises perforations.
6. The package of claim 1 wherein said cover is capable of being peeled off by a user.
7. The package of claim 5 wherein said cover is capable of being peeled off at said perforations.
8. The package of claim 1 wherein said cover is transparent, opaque, colored or any combination thereof.
9. The package of claim 1 wherein said cover further comprises a tab at one end or outside corner of said cover.
10. The package of claim 6 wherein said cover is reclosable at said top perimeter of each of said plurality of containers.
11. The package of claim 1 wherein said cover is capable of covering said cartridge via mechanical means.
12. The package of claim 1 wherein said cover prevents environmental elements from entering said container with said razor cartridge.
13. The package of claim 1 wherein said cover is flexible.
14. The package of claim 1 wherein said cover encompasses two or more of said top perimeters of said plurality of containers.
15. The package of claim 1 wherein said containers comprise a polymeric material.
16. The package of claim 1 wherein said containers comprise polypropylene.
17. The package of claim 1 wherein said containers are removably connected.
18. The package of claim 1 wherein said containers are not removably connected.
19. The package of claim 17 wherein said containers are removably connected at a container separability line.
20. The package of claim 19 wherein said container separability line is a mechanical interconnection.
21. The package of claim 1 wherein said containers are transparent, opaque, colored or any combination thereof.
22. The package of claim 1 wherein each of said containers and each of said covers are integrally formed.
23. A method of making a razor package comprising the steps of:
molding a plurality of containers from a polypropylene material;
placing a razor cartridge within a storage region of each of said plurality of containers; and
sealing a top perimeter of each of said plurality of containers with a plastic cover sheet.

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