Z4855/CB



# PACKAGE FOR RAZOR CARTRIDGES

## FIELD OF THE INVENTION

This invention relates to a razor cartridge package suitable having covers for protectively storing multiple razor cartridges.

## BACKGROUND OF THE INVENTION

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, US patent numbers 6,499,595 and 6,886,690. These types of individual containers are widely used for female razor cartridges.

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 enabling the consumer to be able to individually and easily open and use one razor cartridge at a time in a particular sequence while also providing a level of mechanical and environmental protection for each cartridge.

## SUMMARY OF THE INVENTION

In accordance with the present invention, a novel razor cartridge package includes a plurality of connected containers each for storing at least one razor cartridge, and at least one cover removably attached to a top perimeter of each of the plurality of connected containers wherein the covers are coupled so as to direct a sequence of removal of the covers.

A first cover of a first of the plurality of connected containers overlaps an adjacent second

cover of a second of the plurality of connected containers such that the first cover is removed before the adjacent second cover can be removed. The overlap includes an overlap area less than the area of one of the top perimeters of one of the plurality of connected containers.

The covers may include a tab. In one aspect of the invention, a first tab of the cover of a

first of the connected containers overlaps with an adjacent cover of a second of the connected containers. In another aspect of the invention, a first tab of the cover of a first of the connected containers overlaps with an adjacent second tab of a second cover of a second of the connected containers. The cover is capable of being peeled off by a user and it may be peeled off via the tab. The cover may be made of plastic and may adhesively sealed onto the top perimeters of each of the plurality of connected containers. The cover may be transparent, opaque, colored or any combination thereof, and prevent environmental elements from entering the container with the razor cartridge. The cover may be flexible. In addition, the containers may be transparent, opaque, colored or any combination thereof. Each of the containers and each of the covers may be integrated.

In another aspect of the invention, a method of making a razor package includes molding a plurality of containers from a plastic material, placing a razor cartridge within a storage region of each of the plurality of containers, and sealing a first top perimeter of a first of the plurality of connected containers with a first plastic cover sheet that overlaps a second plastic cover sheet sealed onto a second top perimeter of a second of the plurality of connected containers wherein the second container is adjacent the first container. In this way, the overlapping cover sheets direct a sequence of removal of the first cover sheet from the first containers prior to removal of the second cover sheet from the second container.

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.

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

## BRIEF DESCRIPTION OF THE DRAWINGS

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:

FIG. 1 is a perspective view of a razor cartridge package of the present invention showing overlapping cover sheets with tabs.

FIG. 1A is a side view of FIG. 1.

FIG. 1B is a side view of FIG. 1 showing a cover sheet partially removed.

FIG. 2 is a perspective view of a razor cartridge package of the present invention showing overlapping cover sheets without tabs.

FIG. 2A is a side view of FIG. 2 showing partially removed cover sheets.

FIG. 3 is a perspective view of a razor cartridge package showing tabs that overlap with adjacent cover sheets in accordance with another embodiment of the present invention.

FIG. 4 is a perspective view of a razor cartridge package in accordance with another embodiment of the present invention with tab portions overlapping cover sheets.

FIG. 4A is a perspective view of an alternate embodiment of FIG. 4 of the present invention.

FIG. 5 is a perspective view of a razor cartridge package in accordance with an alternate embodiment of the present invention showing overlapping tab portions.

## DETAILED DESCRIPTION OF THE INVENTION

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 removably attached to a top perimeter of each of the connected containers wherein the covers are coupled, structured, and arranged together such that they direct a predetermined sequence of use by the consumer for the razor cartridges. The sequence of removal of the cover or cover sheets is evident to the user upon viewing the dispenser package. This visual cue or signal provided by the coupled cover

sheets in the dispenser package is adequate to indicate to the user which cartridge to open and use first, second, third, and fourth or whatever the number may be.

For purposes of the present invention, the terms "cover" and "cover sheet(s)" may be used interchangeably herein.

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, (shown with dotted lines) respectively which are stored within storage regions inside containers 12a, 12b, 12c, and 12d, respectively.

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.

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

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. The covers may 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).

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.

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. In a novel aspect of the present invention, the adjacent covers are arranged such that they overlap with each other in such a way as to direct a consumer to remove the covers in a predetermined sequence (e.g., direct the order of use of the razor cartridges). The cover sections or areas that overlap are represented by shaded overlap regions 15a, 15b, and 15c in FIG. 1. Each overlap region or area, as shown in FIG. 1, may be desirably of a smaller area than the total area of the top perimeter of the adjacent container.

For instance, in the present invention, the cover or cover sheet 14d may overlap or extend onto the top of cover sheet 14c at area 15c. The remaining cover sheets are similarly arranged such that cover sheet 14c overlaps or extends over cover sheet 14b at area 15b, and cover sheet 14b overlaps cover sheet 14a at area 15a. Hence, in the present invention, and as depicted in FIG. 1B, cover sheet 14d will desirably be the first cover sheet that the consumer is capable of peeling back (using tab 11d in this example) as it essentially has the top overlap area. The way the cover sheets are coupled together, cover sheet 14c may not be peeled back first, since by doing so, both cover sheet 14d and 14c (e.g., two cover sheets at one time) would come off exposing two razor cartridges 16c and 16d which, unless two cartridges are needed by the consumer, is not a desired outcome.

It should be noted that cover sheet 14a (e.g., the bottom cover sheet) may not overlap with any other cover sheet as because of its location at the bottom of the package and the fact that it likely would be the only cover sheet left once all the other cover sheets were removed that would be capable of being peeled back by a consumer, no direction of use (e.g., by means of the overlap) is necessary for the consumer.

As such, cover sheet 14a may be smaller than other cover sheets 14b, 14c, and 14d that include the area of overlapping regions 15a, 15b, and 15c. FIGs. 1A and 1B are side views of the package of FIG. 1 showing cover sheets 14a, 14b, 14c, and 14d with overlapping regions 15a, 15b, and 15c. While FIG. 1A depicts the overlapping nature of the cover sheets, it also shows how the length of cover sheet 14a may be smaller than the other cover sheets. Additionally, in FIG. 1B, it can be seen clearly how cover sheet 14d is necessarily the first cover sheet that may be taken off by a consumer. In this instance, tab 11d is pulled up and back (shown by arrow 13d) to peel off cover sheet 14d leaving the remaining cover sheets 14a, 14b, and 14c intact for later use. The second next cover sheet to be taken off in the present invention would necessarily be cover sheet 14c; and the third next after that would be cover sheet 14b, and the fourth next after that would be the remaining cover sheet 14a. Thus it can be seen how the overlapping cover sheets of the present invention dictate the order of use or the sequence of use of the razor cartridges.

Though four (4) containers are shown in the packages of figures herein, the present invention contemplates any number of containers (e.g., greater than two) and thus there may be any number of razor cartridges and respective cover sheets considered to also be within the framework of the present invention.

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. 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.

In another embodiment of the present invention, the razor cartridge dispenser package 20 shown in FIG. 2 includes cover sheets 24a, 24b, 24c, and 24d which may be made of a flexible plastic material as described above in conjunction with FIG. 1 for covering containers 22a, 22b, 22c, and 22d respectively. The covers in FIG. 2 are shown arranged or coupled together with overlapping areas 25a, 25b, and 25c as in FIG. 1 except the covers in FIG. 2 are shown without side tabs. Despite the lack of side tabs, the covers in FIG. 2 are coupled together similarly and

capable of being peeled back or off (as will be described below) as in FIG. 1 and in the same order as in FIG. 1 since the cover sheets overlap in the same manner (e.g., top to bottom); cover sheet 24d overlaps cover sheet 24c at overlap area 25c, cover sheet 24c overlaps with cover sheet 24b at overlap area 25b, and cover sheet 24b overlaps with cover sheet 24a at overlap area 25a.

In FIG. 2, cover sheets are shown each having a respective overhanging section 24d', 24c', 24b', and 24a' which may function as the portion of the cover the user would tug on to peel off the cover sheet. These overhanging sections may desirably encompass about the same area as the overlap areas however the present invention contemplates that the overhanging section may be also be slightly larger. The lower portions of each of the overhanging sections may not be adhesively sealed onto the container or adjacent cover sheets to provide easy lifting for the user. It should be noted that FIG. 2 depicts an overhanging section 24a' for the last cover sheet 24a but no overlap area for reasons discussed in conjunction with FIG. 1. Thus, cover sheet 24a may be substantially the same size as the other cover sheets.

Referring now to FIG. 2A, a side view of FIG. 2 is provided clearly depicting the partially removed overlapping cover sheets which dictate the order of use of the razor cartridges inside.

Cover sheet 24d necessarily is first to come off via a pulling back or peeling off of overhang section 24d' as shown by arrow 23d. Similarly, cover sheet 24c is second in the sequence to come off via a pulling back at arrow 23c of overhang section 24c'shown. Cover sheet 24b is third in the sequence to come off via a pulling back of overhang section 24b' as shown by arrow 23b. Cover sheet 24a is fourth and last in the sequence to come off via a pulling back of overhang section 24a' as shown by arrow 23a. It should be noted, however, that overhang section 24a' of cover sheet 24a may not be overlapping with an adjacent cover sheet as there would be no remaining adjacent cover sheet at the point in time when overhang section 24a' would need to be pulled since cover sheet 24a would be the last cover sheet remaining.

FIG. 3 provides a perspective view of an alternate embodiment of the present invention in which dispenser package 30 is shown to include four containers 32a, 32b, 32c, and 32d having cover sheets 34a, 34b, 34c, and 34d, respectively and centrally located tab-like overhang sections 34a', 32b', 32c', and 32d' extending from each cover sheet respectively. Tab-like

overhang section 34d' of cover sheet 34d overhangs or overlaps onto cover sheet 34c. Tab-like overhang section 34c' of cover sheet 34c overhangs or overlaps onto cover sheet 34b. Tab-like overhang section 34b' of cover sheet 34b overhangs or overlaps onto cover sheet 34a.

Thus, the structure and arrangement of the cover sheets together along with the tab-like overhang sections dictate the sequence of use of the razor cartridges or the sequence of removal of cover sheets. For instance, the sequence of use or removal of the cover sheets in the embodiment of FIG. 3 is similar to that of FIG. 2 in that the first to be removed is the top cover sheet 34d via tab-like overhang section 34d', the second to be removed is cover sheet 34c via tab 34c', the third removed is cover sheet 34b via 34b; and then the fourth and last to be removed is cover sheet 34a via 34a' and this is also dictated by the overlapping nature of the tab-like overhang sections. It should be noted, however, that tab-like overhang section 34a' of cover sheet 34a may not be overlapping with an adjacent cover sheet as there would be no remaining adjacent cover sheet for it to overlap onto at the point in time when tab 34a' would need to be used since cover sheet 34a would be the last cover sheet remaining.

While the tab-like overhang sections are similar to the overhang sections described above in conjunction with FIG. 2 in that they overlap the next most adjacent cover sheet and dictate the order of use (e.g., top to bottom), the tab-like structures shown in FIG. 3 may provide an easier place for a user's fingers to latch onto when peeling off the cover sheet as indicated by arrows 33d, 33c, 33b, and 33a depicting the direction of motion of the tabs to peel back the respective cover sheets.

Though the tab-like overhang sections in FIG. 3 are centrally located in the cover sheets, the tabs or overhang section may be formed in any location on the cover sheet. Referring now to FIG. 4, another embodiment of the present invention in which a dispenser package 40 is shown including side or corner tabs 43d, 43c, 43b and 43a on the corners of the cover sheets 44d, 44c, 44b, and 44a of containers 42d, 42c, 42b and 42a respectively wherein the tabs overlap with adjacent cover sheets. For instance in FIG. 4, corner tab 43d overlaps with cover sheet 44c, corner tab 43c overlaps with cover sheet 44b, and corner tab 43b overlaps with cover sheet 44a. Corner tab 43a may not overlap with any cover sheet. It should be noted that the tabs may or may not be disposed on the same side of the container. For instance, the tabs may be on

alternating sides as shown in FIG. 4A where tab 43c and 43a are shown disposed on the left side of the package 40.

The embodiments depicted in FIGs. 3 and 4 are distinguishable from the embodiment in FIG. 1 since in FIGs. 3 and 4 the tabs serve a dual purpose; a first purpose being the mechanism for peeling back the respective cover sheets and a second purpose being providing the direction for the predetermined order of use of the cartridges or removal of the cover sheets in that the tabs in both FIGs. 3 and 4 overlap adjacent cover sheets. On the contrary, the side tabs in FIG. 1 serve as the peel back mechanism but in and of themselves do not provide any overlap (the overlap being provided by the arrangement of the cover sheets) and as such the tabs do not directly dictate the sequence of use (or removal of cover sheets) which is signaled visually to the user by the overlapping cover sheets.

The embodiments of FIGs. 3 and 4 may be more desirable in that the signal to the user of the order of use and the actual means for doing so are incorporated in the same structure (e.g., in the tab area).

Referring now to FIG. 5, an alternate embodiment of the present invention is shown with dispenser package 50 including overlapping tabs 51d and 51c of cover sheets 54d and 54c respectively and overlapping tabs 51b and 51a of cover sheets 54b and 54a, respectively. In this embodiment, though the order of use of the top two cartridges and the order of use of the bottom two cartridges is dictated (e.g., since tab 51d is disposed on top of tab 51c, cover sheet 54d will be peeled off first and then cover sheet 54c and likewise since tab 51b is disposed on top of tab 51a, cover sheet 54b will be removed first and then cover sheet 54a) the order of use of all four cartridges may not be known or may not be dictated by the overlapping nature of the tabs since it is unknown if a user would first peel off cover sheet 54b or cover sheet 54d (via tab 51b which overlaps tab 51a or via tab 51d which overlaps 51c, respectively). Thus, while this embodiment provides another possible design choice which directs the sequence of use of cartridges with the overlapping adjacent cover tabs, other visual indicia may be necessary to further indicate to the user a preferred order of use. Such indicia may include placing a number 1 on tab 51d, a number 2 placed on tab 51c, a number 3 placed on tab 51b and a number 4 placed on tab 51a.

The covers or cover sheets of the present invention are desirably flexible. However, the covers may potentially be made of a hard plastic or less flexible material (not shown) and in this case they may be lifted off or opened (e.g., like a door) rather than peeled off as described above. They may be lifted off from one or more sides and may be mechanically or otherwise attached to the individual containers; for instance via hinges.

The covers of the present invention may desirably be removed completely, however even if they are not, the opening provided by removing or lifting the cover (whether the cover is capable of being removed completely or not from the individual container) should be adequate to allow access to the razor cartridge disposed inside.

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

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. The containers may be made of any material that is effective at protecting mechanical aspects of the razor cartridge nor preventing environmental entrants. Accordingly, if a container were made with cardboard, it may also need to be combined with additional materials to produce a container that is more robust, such as with plastics or other types of materials.

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.

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.

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, while FIGs. 1-5 described above depict a "serial" type attachment (e.g., four containers in a row), a "2x2/back to back" type cartridge container package or a series of two or three or five or more container packages (not shown) are also contemplated in the present invention.

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.

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.

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".

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.

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 characterized by:
   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 a top perimeter of each of said plurality of connected containers wherein said covers are coupled so as to direct a sequence of removal of said covers.

2. The package of claim 1 wherein a first cover of a first of said plurality of connected containers overlaps an adjacent second cover of a second of said plurality of connected containers.

3. The package of claim 2 wherein said first cover is removed before said adjacent second cover can be removed.

4. The package of claim 2 wherein said overlap comprises an overlap area less than the area of one of said top perimeters of one of said plurality of connected containers.

5. The package of claim 1 wherein said cover is larger than said top perimeter of said plurality of connected containers.

6. The package of claim 1 wherein said covers comprise a tab.

7. The package of claim 6 wherein a first tab of said cover of a first of said connected containers overlaps with an adjacent cover of a second of said connected containers.

8. The package of claim 6 wherein a first tab of said cover of a first of said connected containers overlaps with an adjacent second tab of a second cover of a second of said connected containers.
9. The package of claim 1 wherein said cover is adhesively sealed onto said top perimeters of each of said plurality of connected containers.

10. The package of claim 1 wherein said cover is capable of being peeled off by a user.

11. The package of claim 1 wherein said cover comprises plastic.

12. The package of claim 1 wherein said cover is transparent, opaque, colored or any combination thereof and said containers are transparent, opaque, colored or any combination thereof.

13. The package of claim 1 wherein said cover prevents environmental elements from entering said container with said razor cartridge.

14. The package of claim 1 wherein said cover is flexible.

15. The package of claim 1 wherein each of said containers and each of said covers are integrated.