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CARTON HAVING AN INTERNAL, ARTICLE-RETAINING
POCKET AND METHOD OF MAKING SAME

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CARTON HAVING AN INTERNAL ARTICLE-RETAINING POCKET AND METHOD OF MAKING SAME

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10 Claims

ABSTRACT OF THE DISCLOSURE

A carton structure and method of making it wherein the carton is of tubular form and has an interiorly positioned pocket that extends across at least two abutting panels. The pocket is formed from a flexible material which is adhered along at least two marginal areas to the inner surface of the carton. The pocket thus received and holds printed matter having a width and length greater than the width of either of the panels of the carton.

Background of the invention

This invention relates to an improved tubular carton structure and to a method of making the carton wherein the carton includes means for carrying additional printed material in sheet form. More particularly, the invention relates to a tubular carton and method of making it wherein the carton has an interiorly positioned pocket suitable for receiving and holding printed matter within the carton. The inclusion of sheets of printed material with packaged products has been practiced for some time. The printed material frequently carries detailed instructions for the use of the product contained within the package. Sometimes it provides a vehicle for advertising directed to related or other products marketed by the same manufacturer, or it comprises a redeemable coupon by which subsequent purchases of that product, or others marketed by the same manufacturer, can be purchased at reduced prices.

Oftentimes the printed material is included in the package in folded-up form, or is loosely inserted within the package between the article and an interior wall of the package, provided the package is large enough and the printed material small enough. Where the printed material is of such a size that it cannot be inserted within the package without folding it, certain problems arise, particularly when the printed material, such as, for example, a redeemable coupon, is to be returned and subsequently processed on high-speed sorting and tabulating equipment. In that case it is highly desirable that the returned printed matter not be folded or severely creased because the sorting and tabulating equipment may not be capable of efficiently handling such folded or creased materials.

A tubular carton which permits the inclusion of a coupon in flat, unfolded form and in such a way that pilferage by unscrupulous consumers is minimized as shown in U.S. Patent 3,214,075, issued Oct. 26, 1965, to C. L. Champlin et al. That carton includes a separate panel, which is generally known as a riser, and which houses the coupon in flat condition. However suitable that carton may be, it is more expensive than a standard carton which does not include an additional material from which the riser is formed. Additionally, the packaging of a multiplicity of such riser containing cartons in a larger container is made more difficult by reason of the projecting riser, thereby further increasing the costs of packaging articles in cartons having that configuration.

The present invention overcomes these deficiencies by providing a tubular carton for internally receiving and holding printed matter. The carton includes a minimum additional amount of material and thus is less expensive than prior art cartons. Moreover, the carton does not incorporate projecting portions which would interfere with the economical packaging of such cartons into larger containers.

Summary of the invention

Briefly stated, in accordance with one aspect of the present invention, a tubular carton is provided having opposed front and back panels, opposed side panels, and including end closure means. The front and back panels are connected alternately with the side panels along their respective longer marginal edges. An interiorly positioned, coupon-retaining pocket extends across portions of at least two abutting panels, the pocket being formed by adhering a sheet of flexible material to portions of the interior surfaces of the panels. The flexible material is attached to the panels to form a pocket therebetween by adhering at least two marginal areas of the material to the inner surfaces of the panels. The pocket thus formed receives and holds a sheet of printed matter having a length and width greater than the width of either of the abutting panels.

Brief description of the drawing

FIGURE 1 is a plan view showing the inside surface of a carton blank from which the carton of the present invention can be formed and shows a pocket formed from a sheet of flexible material within which a redeemable coupon has been inserted.

FIGURE 2 is a perspective view of the carton blank of FIGURE 1 in erected and closed condition.

FIGURE 3 is a perspective view of the erected carton of FIGURE 2 wherein the carton has been opened to expose the pocket and the coupon therein contained.

FIGURE 4 is a cross-sectional view taken along the line 4—4 of FIGURE 2 and shows the interiorly positioned pocket and the coupon bridge formed by the abutting panels to which the flexible material is adhered.

FIGURE 5 is a cross-sectional view similar to that of FIGURE 4 wherein the pocket and coupon follow the angular corner of the carton.

Description of the preferred embodiments

Referring now to the drawing and particularly to FIGURE 1, there is shown a flat carton blank 10 from which the tubular carton of the present invention can be formed. Carton blank 10 comprises parallel longitudinal score lines 11, 12, 13, and 14, and parallel transverse score lines 15, 16, 17, and 18. Score lines 11, 12, 15, and 16 define front panel 22 of the carton formed from carton blank 10, while score lines 13 and 14 and marginal edges 19 and 20 define back panel 23 of the carton. Similarly, score lines 12, 13, 15, and 16, and score lines 14, 15, and 16, and marginal edge 21, respectively, define side panels 24 and 25 of the carton. An additional panel 26 is connected along score line 11 to front panel 22 and serves as a glue lap panel to form a manufacturer's joint and is glued to the inner surface of side panel 25 when the carton blank 10 is formed into a tubular carton. As will also be apparent, side panels 24, 25 are the same size, as are front and back panels 22, 23, so that the resulting carton is rectangular in cross section.

Carton blank 10 includes end closure means which, as shown, are of the tuck-tab type. Tabs 27 and 28 are connected to side panels 24 and 25, respectively, along score line 15; tabs 29 and 30 are connected to side panels...
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24 and 25 respectively, along score line 16. End closure panels 31 and 32 extend from front panel 22 along score line 16, respectively, and have tuck tabs 33 and 34 attached thereto along score lines 17 and 18. These structural elements are well known to those skilled in the art and it will be apparent to those skilled in the art that their position with relation to the front, back, or side panels can be shifted as desired without change in function or effect. Although the closure means herein shown and described are of the tuck-tab type, various other closure configurations can also be employed, such as, for example, end flaps which are subsequently glued together in overlapping relationship, and interlocking end panels.

Positioned in back panel 23 is a holding means comprising cut line 35 that defines retaining flap 36, to receive and hold a coupon 37 which is placed against the inner surface of carton blank 10. Flap 36 can be V-shaped as shown, or it can be of any other convenient shape by means of which coupon 37 can be held in position. Although only one such flap 36 is shown, it would be apparent to one skilled in the art that additional flaps 36 can be provided, if desired, to hold coupon 37 in a predetermined position. Similarly, although retaining flap 36 as herein shown and described is a preferred holding means, other suitable holding means can also be employed to temporarily or semipermanently hold coupon 37 in position such as, for example, a spot of glue or of quick-setting adhesive applied to the coupon, or to an extension thereof, and by which the coupon is partially adhered to the inner surface of the carton, or by the application of vacuum through one or more apertures in a panel of the carton, none of which is shown. The provision of a holding means in the form of either a flap such as flap 36, or a vacuum aperture is preferred since it also provides a means for visually checking whether a coupon, such as coupon 37, is present within the carton without the necessity of opening the carton.

As shown in FIGURE 1, a generally V-shaped opening means 38 comprising a line of perforation is provided across front panel 22 and side panel 24. Opening means 38 is provided to permit easy access to the interior of the erected carton in order to facilitate the removal of coupon 37 in a manner which will be hereinafter described in further detail. In its preferred form, the line of perforations forming opening means 38 is impressed in two adjacent panels as shown; however, it is not limited to this particular configuration and can be impressed into more or fewer panels, as desired. However, the tearing action has been found to be most efficient when opening means 38 is impressed as shown in FIGURE 1.

After carton blank 10 has been formed as described above, coupon 37 can be placed against and held in a predetermined position adjacent the inner surface of carton blank 10 by a holding means, such as retaining flap 36 shown in FIGURE 1. The provision of such a holding means, although desirable, is not absolutely necessary.

Coupon 37 is in flat form and has a length L and width W, each of which is greater than the transverse width of any of the front, back, or side panels of carton blank 10. Although herein referred to as a coupon, the printed matter carried within carton 42 (see FIGURE 2) formed from carton blank 10 can also be advertising matter or product usage instructions. Additionally, the printed matter can comprise one or more sheets that have not been folded, or it can comprise one or more folded sheets. However, it is present inventory in connection with a redeemable coupon 37 by means of which the purchaser of the packaged product can secure a refund or price reduction on subsequent purchases of the same or other products. Such redeemable coupons 37 can be packaged within a tubular carton of the general size and configuration in which toothpaste or other products packaged in collapsible tubes are marketed.

The coupons 37 are usually of a size which is greater than the width of the adjacent panels of carton 42 and are limited in size by the sorting and tabulating equipment by which a record of coupons 37 redeemed can be kept. Furthermore, such redeemable coupons 37 are usually printed on a relatively stiff paper stock having a basis weight which can range from about 25 to about 100 pounds per ream of 3000 square feet and which can have a thickness of from about 1 to about 20 mils so that coupons 37 can be easily handled by the tabulating equipment. Frequently, coupons 37 are coded by being punched in predetermined areas, which punches are interpreted by the sorting and tabulating equipment. Since these coupons 37 are usually handled on high-speed sorting and tabulating equipment and since it is frequently found that folding or creasing prevents the equipment from handling coupons 37 in an efficient manner, it is desirable that coupons 37 remain unreased.

After coupon 37 is inserted under retaining flap 36, a thin sheet of flexible material such as film 39 is adhered to portions of the inner surface of carton blank 10 and in superposition relationship with coupon 37 to form a pocket within which coupon 37 can be retained and held, as shown in FIGURE 1. The flexible material can be plastic film such as, for example, polyethylene, polypolypropylene, polystyrene, or polyester, or it can be paper, cellophane, or the like. When a plastic film is employed it is preferred that it be transparent to a small spot of glue or of quick-setting adhesive applied to the coupon by the consumer of the nature of the promotion therein offered when carton 42 is opened as hereinafter described to effect removal of coupon 37.

Film 39 is adhered along at least two of its opposed marginal areas to the inner surface of carton blank 10 as shown in FIGURE 1 where films 39 are shown and 41 positioned outwardly by coupon 37 serve such purpose. Alternatively, glue strips can be applied to either or both of the remaining marginal areas of film 39 to either fully enclose or partially enclose coupon 37 within the pocket thus formed. As further shown in FIGURE 1, film 39 is adhered to each of abutting panels 23 and 24. However, if the width of coupon 37 is the same as, or substantially the same as, the sum of the widths of the abutting panels 23 and 24, film 39 can be adhered to panels 22 and 25.

One of the principal advantages of the present invention is that it provides a coupon-containing carton in which coupon 37 is within the carton and therefore is not readily pilferable. To further improve pilfer-proofness, it is preferred that all four marginal edges of the flexible material be adhered to the inner surface of carton blank 10.

Tubular cartons 42 of the type herein described are generally made and shipped in flat condition, then erected and filled by the user of such cartons. Carton 42 comprising the present invention can be formed in flat condition by folding front panel 22 inwardly about score line 12 and then folding side panel 25 inwardly about score line 14 so that a portion of side panel 25 overlies panel 26. Glue is applied to panel 26 and panels 25 and 26 are pressed together until the glue has set. The carton can then be erected by pressing inwardly on score lines 12 and 14 to form a tube of rectangular cross section, closing an end of the carton by infolding flaps 27 and 28, folding end closure panel 31 in overlying relationship with associated flaps 27 and 28, and inserting tuck tab 33 into the space between infolded flaps 27 and 28 and back panel 23 of the carton. The product to be packaged in the carton can then be inserted in the other end and that end closed in a similar manner to provide a completed carton 42.

The completed carton 42 is shown in FIGURE 2 and is formed in the manner of which the consumer sees and purchases the product. After purchase, the product is removed from the carton through the ends in the well-known manner. Access to the coupon is obtained by pressing inwardly on tab 43 defined by the line of perforations comprising
opening means 38 until the cartonboard intermediate the performances ruptures, whereupon tab 43 is grasped and pulled outwardly until coupon 37 is exposed as shown in FIGURE 3. At this point coupon 37 can readily be removed from the pocket by releasing film 39 from the opening portion of panel 24 along glue strip 40.

As hereinbefore noted, redeemable coupons 37 are often printed on a relatively stiff paperboard stock, and since they must be handled by automatic sorting and tabulating equipment it is frequently desirable that they not be folded or creased. To permit coupon 37 to be retained within carton 42 in uncreased form, the lateral spacing between glue strips 40 and 41 is preferably greater than the width W of coupon 37 by an amount ranging between about ¾ inch to about ¾ inch. If this difference is less than about ¾ inch, coupons 37 made of the relatively stiff paperboard stock previously described will be creased when the carton 42 is squared. If this difference is greater than about ¾ inch coupons 37 will occupy a disproportionate amount of space within carton 42 and could impede the insertion of articles to be packaged therein. The described arrangement permits coupon 37 to bridge the corner of the carton 42 as shown in FIGURE 4 and not be creased or folded. The degree of bridging is related to the difference between the lateral spacing between glue strips 40 and 41 and the width W of coupon 37: the greater that difference is, the larger will be the radius of curvature of coupon 37 and the less likely it will be for a crease to develop.

If bending or creasing of coupon 37 is not a problem, it is preferred that glue strips 40' and 41' be spaced as shown in FIGURE 5 to provide a minimum of clearance between the edges of coupon 37' and the pocket formed by film 39'. When such a carton 42' is erected, coupon 37' and flexible material 39' follow the corner of carton 42' and form a right angle. This particular configuration is highly preferred since it permits film 39' to be adhered around all four marginal areas thereof to the interior surface of the carton, thus considerably improving its piffer-proofness. With such a structure, theft of the coupon from within the carton is significantly discouraged.

While particular embodiments of the invention have been illustrated and described, it will be apparent to those skilled in the art that various changes and modifications can be made without departing from the spirit and scope of the invention, and it is 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. In a tubular carton having opposed front and back panels, opposed side panels, and including end closure means, said front and back panels connected alternately with said side panels along their respective longer marginal edges, the improvement comprising an interiorly positioned pocket extending across portions of at least two abutting panels, said pocket formed by adhering a sheet of flexible material to portions of the inner surfaces of said carton along at least two marginal areas of the sheet parallel to the abutting edges of said abutting panels, and a sheet of printed matter within said pocket, said printed matter having a length and width greater than the width of either of said abutting panels.
2. The carton of claim 1 wherein said flexible material is a transparent film.
3. The carton of claim 1 wherein said carton includes holding means to retain said printed matter in position against the interior surface of said carton.
4. The carton of claim 3 wherein said holding means comprises at least one retaining flap formed in at least one of said abutting panels and underlying said flexible material.
5. The carton of claim 1 including perforated opening means extending across at least one panel of said carton to permit easy access to the interior thereof and thereby facilitate removal of said printed matter.
6. The carton of claim 1 wherein said printed matter is a paperboard coupon and said flexible material is adhered along two parallel marginal areas thereof to said abutting panels, one of said marginal areas adhered to one of said panels and the other marginal edge adhered to another panel, the lateral spacing between said adhered areas of said flexible material being greater than the corresponding dimension of said printed matter by an amount of from about ¾ inch to about ¾ inch to thereby permit said coupon to bridge the corner formed at the junction of said abutting panels when said carton is in erected form and thereby prevent creasing of said coupon.
7. The carton of claim 1 wherein said flexible material is adhered to said abutting panels along two parallel marginal areas thereof, one of said marginal areas adhered to one of said panels and the other marginal area adhered to another panel, the lateral spacing between said adhered areas of said flexible material ranging from 0 inch to about ¾ inch greater than the corresponding dimension of said coupon, whereby to cause said coupon to be creased along a line adjacent the corner of said carton formed by the abutment of said panels.
8. The carton of claim 7 wherein said flexible material is adhered along all four marginal areas thereof to the inner surface of said carton to fully enclose said coupon within said pocket.
9. A method of making a tubular carton having an interiorly positioned pocket suitable for receiving and holding printed matter, said method comprising:
(a) forming a flat carton blank having front, back, and side panels and including end closure means;
(b) placing a sheet of printed matter against the inner surface of said carton blank, said sheet of printed matter having a length and width greater than the width of any of said panels;
(c) superposing a sheet of flexible material over said printed matter;
(d) adhering said superposed sheet along at least two marginal edges thereof to the inner surface of said carton blank to form a pocket; and
(e) forming a tubular carton from said carton blank so that said pocket is positioned within said carton.
10. The method of claim 9 including the additional step of holding said sheet of printed matter against the inner surface of said carton blank after placement of the printed matter thereagainst and until said superposed sheet is adhered to the inner surface of said carton blank.

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