

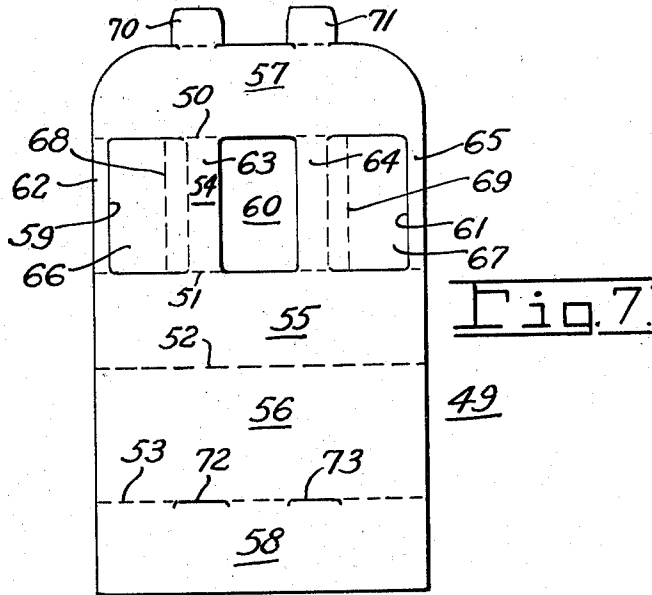
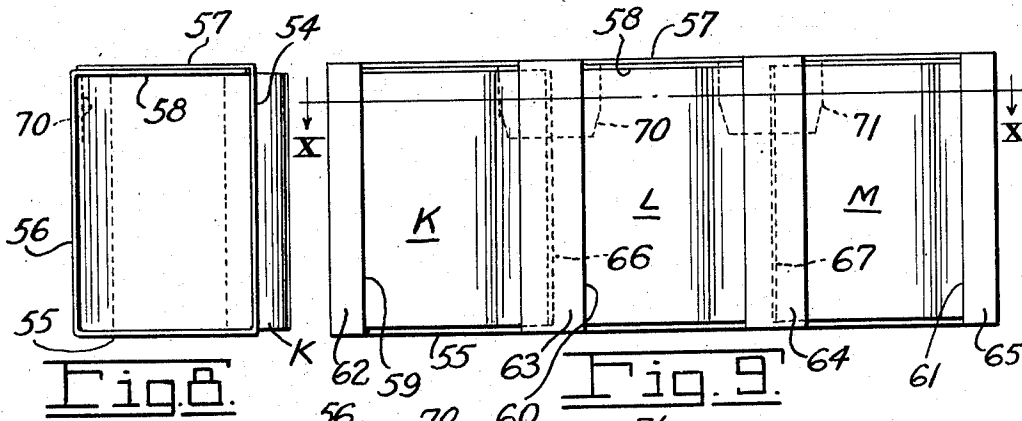
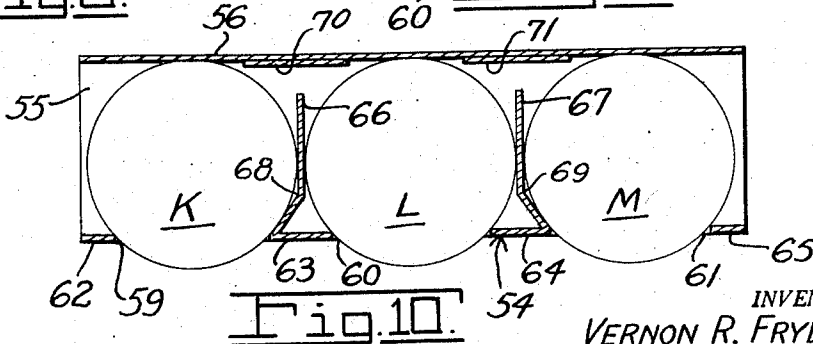
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FOLDING CARTON

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FOLDING CARTON

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1 Claim. (Cl. 206—65)

This invention relates to folding cartons made of paper such as thin cardboard or the like.

An object of the invention is to provide a carton which is open-ended and provided with spaced full height openings in at least one side, through each of which openings a cylindrical object in the carton may partially project, the vertical sides of said openings securing said cylindrical objects in place and preventing the same from sliding lengthwise of the carton out of either open end thereof.

Another object of the invention is to provide a folding carton as above set forth in which both sides may be provided with aligned openings extending the full height of the carton and through each pair of aligned openings a cylindrical object may partially project whereby objects placed side by side within the carton are retained in place by the sides of said openings.

A further object of the invention is to provide a carton as above set forth in which certain of the openings may be provided with hinged flaps which when folded inwardly serve as spacers for objects in the carton.

A still further object of the invention is to provide a folding carton of simple construction which is easily manufactured, economical, and efficient for its intended purpose.

In modern day merchandising of canned goods or goods packed in glassware, the tendency is to induce the purchase of more than one can or jar at a time. Therefore, it is an effective inducement to provide an economical and inexpensive and efficient folding or wrap around carton which is so constructed that cylindrical objects such as canned goods or goods packed in glassware will be retained in the carton by the sides of openings formed in either the front or the back side of the carton or both.

It is therefore a further object of the invention to provide a folding carton that will perform the aforesaid purposes and accomplish the aforesaid objects.

Other objects of the invention will be apparent to those of ordinary skill in the art to which it pertains from the following description and drawings.

In the drawings:

Figure 1 is a view of a carton blank in the flat, arranged and constructed in accordance with an embodiment of the invention;

Fig. 2 is a view of a carton formed from the blank of Fig. 1 and having therein a plurality of cylindrical objects such as canned goods;

Fig. 3 is a view in section taken on line III—III of Fig. 1 showing the manner in which cylindrical objects such as cans are placed in the carton and retained in place;

Fig. 4 is a view of a carton blank in the flat of a modified form of carton arranged and constructed in accordance with an embodiment of the invention;

Fig. 5 is an end view of the carton folded into shape for containing cylindrical objects such as canned goods or the like;

Fig. 6 is a view in section taken on line VI—VI of

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Fig. 5 showing cylindrical objects in the carton and the manner in which they are retained therein;

Fig. 7 is a view of a carton blank in the flat of a still further modified form or embodiment of the invention;

Fig. 8 is an end view of the carton of Fig. 7 in its article containing condition;

Fig. 9 is a view in front elevation of a carton formed from the blank of Fig. 7; and

Fig. 10 is a view in section taken on line X—X of Fig. 9 showing cylindrical objects within the carton and the manner in which they are retained in place.

In Figure 1 of the drawings a carton blank 1 is shown of substantially rectangular form. The blank may be of paper such as relatively thin cardboard. The blank is scored crosswise at locations 2, 3, 4, and 5 to form hinge or fold lines. The areas of the blank between the fold lines 2 and 3, 3 and 4, and 4 and 5, define the bottom 6 and the front and back sides 7 and 8, respectively. The end portions 8a and 9a, of the blank extending from the fold lines 2 and 5 respectively, form the top flaps of the carton.

The sides 7 and 8 are provided with a plurality of spaced openings, 9, 10, and 11, and 12, 13, and 14, respectively. These openings as shown, extend the full height of the sides and back as shown in Fig. 2.

As shown in Fig. 3, the width W of the openings 9 to 11 and 12 to 14 inclusive, is less than the diameter D of the cylindrical objects in the carton. Furthermore, the width W1 between the front and the back sides 7 and 8 is less than the diameter D of the cylindrical objects. Therefore when the objects are placed in the carton as shown in Fig. 3 and the top flaps 8a and 9a are folded over one another and secured as with glue or other securing means such as tabs, the cylindrical objects project through the openings in the front and back of the carton as shown. Therefore, object E projects through openings 9 and 12, object F projects through openings 10 and 13, and object G projects through openings 11 and 14.

Since the objects E, F and G, project through the pairs of openings 9—12, 10—13, and 11—14, they are retained in place in the carton and are secured against movement lengthwise of the carton by the vertical sides or edges of the strips 17, 18, 19, 20, that frame the openings 9, 10 and 11 in the front panel or side 7 and the vertical edges of the strips 21, 22, 23, and 24 which frame the openings 12, 13, and 14 in the back side of the carton.

The carton shown in Figs. 5 and 6 is formed from the blank shown in Fig. 4. That blank is formed from a single piece of relatively thin cardboard which is scored transversely at locations 26, 27, 28 and 29. The portions of the blank between the scored lines 26 and 27, 27 and 28, and 28 and 29, form the front side 30, the bottom 31, the back 32, respectively. The portions at the ends of the blank form the top flaps 33 and 34. As shown, the flap 34 is hinged to the top edge of the back panel 32 and the portion 33 is hinged to the top of the front panel 30.

The fold line at the location 29 may be slitted as at 36 and 37 and the flap 33 may be formed at its outermost edge with tabs 38 and 39 which are spaced to be inserted in the slits 36 and 37 when the carton is formed as in Figs. 5 and 6, and the top flaps are folded over one another. The tabs when registering in the slits lock the carton in its closed or wrap around condition.

The front panel 30 is provided with openings or windows 40, 41 and 42. These openings are bounded by strips 43 and 44 and 44 and 45 and 45 and 46, respectively.

As shown, the edge of the bottom panel 31 at the bottom

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of the openings 40, 41 and 42, is scalloped. The scallops project into the openings 40, 41 and 42 forming ledges 47 at the bottom of the carton as shown in Fig. 5. Similarly, the edge of the top panel or flap 33 at the fold line 26 projects into the openings by means of scallops which form ledges 48 that project upwardly of the front panel 30 when the carton is in the condition shown in Figs. 5 and 6.

The width of the openings 40, 41 and 42, as in the case of the carton shown in the preceding views, is less than the diameter of cylindrical objects H, I, and J, placed in a carton. Therefore, when these objects H, I and J have been placed on carton bottom 31 and the sides and top flaps have been folded about them as in Figs. 5 and 6, those objects extend outwardly through the openings 40, 41 and 42 and are retained in place by the vertical edges of the strips 43, 44, 45 and 46, thereby preventing the articles from moving lengthwise of the closed carton and through the open ends thereof. When the objects H, I and J are in place in the closed carton the outermost portions which project through the openings 40, 41 and 42, extend to approximately the outer ends of the tabs 47 and 48.

The flaps 33 and 34 may also be secured together with any suitable glue or the like, as in the case of the carton shown in Figs. 1, 2 and 3. In that case the tabs 38 and 39 and the slits 36 and 37 may be omitted.

In Figs. 7 to 10 inclusive, a still further modified form of the invention is illustrated.

Fig. 7 illustrates a carton blank 49 in the flat made from a single piece of relatively thin cardboard. The blank is rectangular in shape and is provided with score lines at the locations 50, 51, 52 and 53, respectively. The score lines extend transversely or crosswise of the blank and are parallel to each other. The portion of the blank between the score lines 50 and 51, 51 and 52, and 52 and 53, respectively, form the front, bottom and back panels 54, 55 and 56, respectively. The end portions of the blank adjacent the score lines 50 and 53, form flaps 57 and 58 which when folded over one another constitute the top of the carton.

These openings are bounded by vertical strips 62 and 63, 63 and 64, and 64 and 65, respectively. The openings 59, 60 and 61 extend the full height of the front panel 54.

The carton shown in Figs. 7 to 10 inclusive is intended primarily for packaging goods which need to be separated to prevent breakage or damage. Therefore, the openings on either side of an opening may be provided with separator flaps that are hinged to the associated vertical strips of the front panel. Thus as shown in Figs. 7, 9 and 10, the opening 60 is free of any flaps while the openings on either side, namely, the openings 59 and 61, are provided with separator flaps 66 and 67. Flaps 66 and 67 are hinged to the vertical strips 63 and 64 which form the opening 60. The flaps 66 and 67 are formed by severing the carton at one vertical side and at the top and bottom of the openings 59 and 61, so that the opposite vertical sides of the flaps are integral with the vertical strips 63 and 64 respectively. The flaps or spacers 66 and 67 may be provided with vertical score

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lines 68 and 69 respectively, to cause the flaps to center themselves between objects K, L and M when placed in a carton as shown in Fig. 10. The score lines allow the separators to be bent inwardly and then rearwardly as shown in Fig. 10. The rearwardly extending portions come in between the points of tangency of the objects K, L and M.

When objects are to be placed in a carton such as shown in Figs. 7 to 10, the carton is laid flat and the objects are placed on the bottom panel. The flaps 66 and 67 are then raised and the sides are swung upwardly and the top flaps folded over one another and secured to each other by the tabs shown or by means of glue. The tabs are indicated at 70 and 71 and those tabs are adapted to be inserted into slits 72 and 73. When the carton sides are folded upwardly and the flaps 66 and 67 turned inwardly to their position as separators and the top flaps are secured, objects K, L and M, if made of glass, will be separated by the spacers 66 and 67 to prevent breakage. Since the objects K, L and M extend outwardly through the openings in the front panel as shown in Fig. 10, those objects are retained in place by the vertical edges of the strips 62, 63, 64 and 65.

Having thus described the invention it will be apparent to those of ordinary skill in the art to which it pertains that the illustrated embodiments of the invention may be modified without departing from the spirit or the scope thereof.

Therefore, what is claimed as new and desired to be secured by Letters Patent is:

A package which comprises a plurality of cylindrical objects of predetermined height and diameter and a carton surrounding and embracing said objects, said carton comprising a bottom panel, front and back side panels, a top panel, means for hinging edges of the panels to each other, the height of the side panels being substantially equal to the predetermined height, the width of the top and bottom panels being equal and substantially less than the predetermined diameter, one of the side panels only having a plurality of spaced openings extending the full height thereof, a flap hinged to one upright edge only of one of the openings, the height of said flap being substantially equal to the predetermined height, the flap being angularly bent and extending inwardly of the carton between the objects and in engagement with the top and bottom panels, the width of said openings being less than the predetermined diameter, objects being received inside the carton in side by side relation, with each object extending part way through one of the openings to lock the objects in place inside the container.

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