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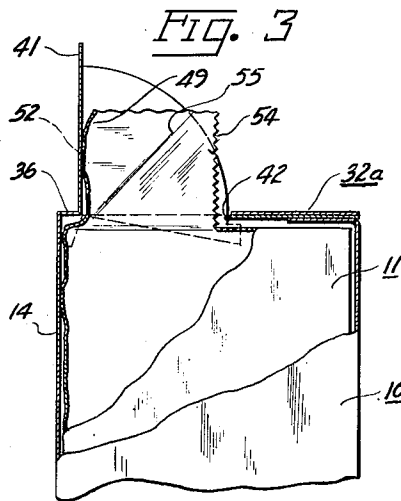
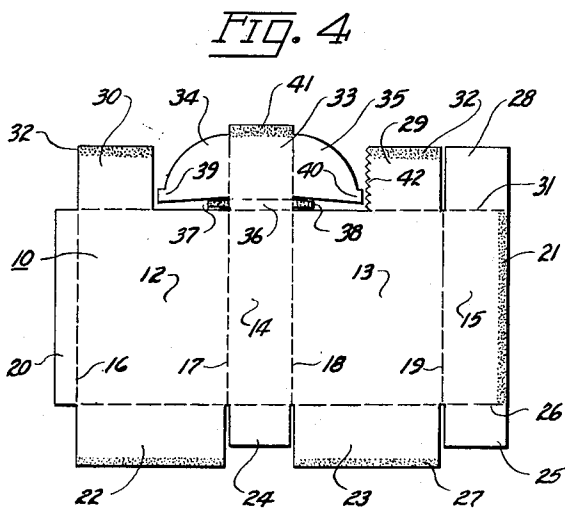
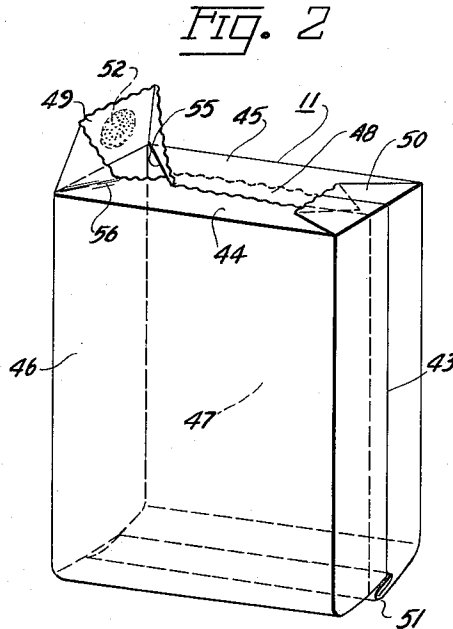
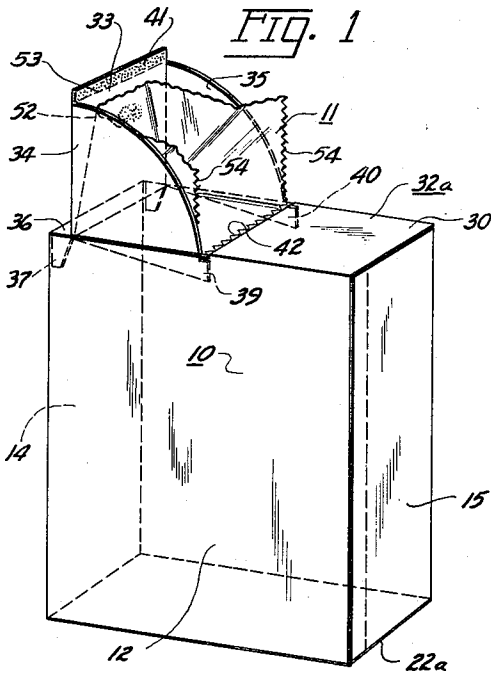
R. F. MCGINNIS

2,593,778

CARTON

Filed Oct. 6, 1947

2 SHEETS—SHEET 1



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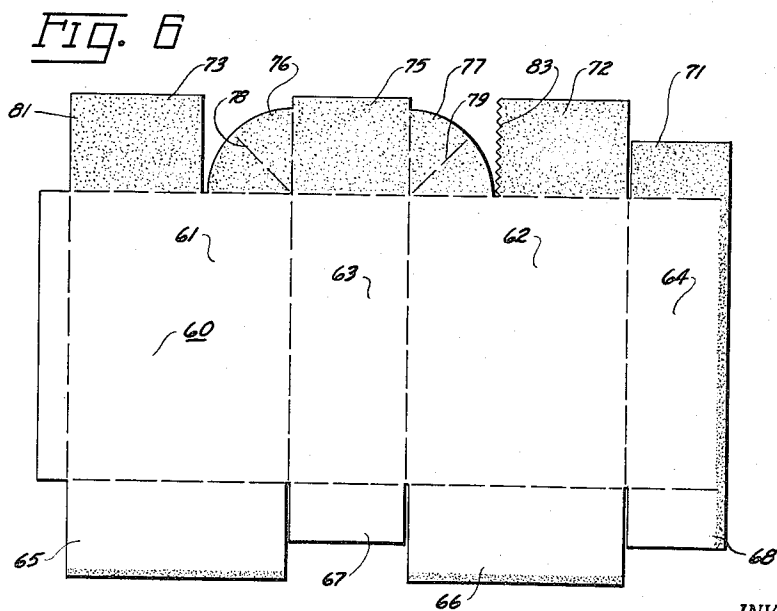
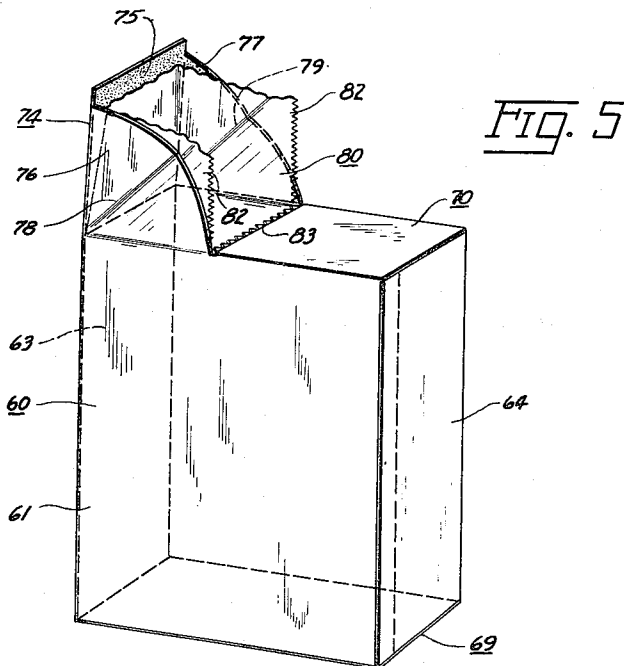
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2 SHEETS--SHEET 2



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UNITED STATES PATENT OFFICE

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CARTON

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9 Claims. (Cl. 229-17)

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This invention relates to packages or cartons and particularly to cartons adapted for the packaging of food stuffs such as dry cereals and the like.

It is common practice, in the packaging of dry cereals and like products, to provide an outer container or box of light weight fiberboard or heavy stiff paper and an inner liner of relatively moistureproof material such as waxed paper or the like. The inner liner serves to exclude moisture and thus keep the contents fresh and this inner liner is frequently formed as a unit by itself and filled with cereal which is sealed therein by special packaging machinery.

The outer container, which may be blanked out by means of punch presses and special dies, may now be folded up in position to enclose the filled liner and the ends folded down and glued, all by means of other specialized machinery.

Packages of this nature may be opened by the consumer in any one of several ways, the most common being to pry open the several flaps of the lid or to cut the top edge of the box on at least three sides to permit the top to be raised. The inner liner may then be unsealed or torn open.

Such containers are not convenient, nor are they adapted for properly protecting the contents after once having been opened.

Packages have been proposed in the past in which hinged lids or covers have been provided for convenience in reaching the contents or the inner liner. In such packages, however, the liner must be unfolded or torn open and then refolded when the package is reclosed.

A primary object of my invention, therefore, is the provision of an improved carton or package especially adapted for dry cereals.

A further object of my invention is the provision of an improved lid or closure member for packages.

Another feature and object of my invention is the provision, in a package or carton, of means for simultaneously opening both the outer container and the inner liner thereof.

Another primary object of my invention is the provision, in a carton of this nature, of means providing an improved pouring spout.

A still further feature and object of my invention is the provision, in combination with a pouring spout, of means for facilitating the opening or tearing of the inner liner.

Other and further features and objects of the invention will be more apparent to those skilled in the art upon a consideration of the accom-

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panying drawings and following specifications, wherein are disclosed several embodiments of the invention, with the understanding, however, that such changes may be made therein as fall within the scope of the appended claims, without departing from the spirit of the invention.

In said drawings:

Figure 1 is a view in perspective of a package constructed in accordance with a preferred embodiment of my invention and illustrates, in particular, the manner in which the inner liner is unfolded and opening when the pouring spout is lifted.

Figure 2 is a view in perspective showing the inner liner alone.

Figure 3 is a fragmentary view of the package shown in Figure 1, with portions thereof broken away to better illustrate the structure.

Figure 4 illustrates the shape and fold lines of the die-cut outer container as it appears before folding.

Figure 5 is a view in perspective of a package embodying my invention in a modified form, and

Figure 6 illustrates the shape of the die-cut blank forming the outer container of the package shown in Figure 5.

Referring now to these drawings, and to Figures 1 and 3 thereof in particular, in which the outer container has been indicated by the numeral 10 and the inner liner by the numeral 11.

The outer container is preferably die cut, in the shape illustrated in Figure 4, from light weight fiberboard or like material. This outer member of the package includes side portions 12 and 13, and end portions 14 and 15 which, when folded along the lines 16, 17, 18 and 19, form the walls of the carton. The tab 20 is secured to the end wall 15 by adhesive applied as at 21 in the usual manner. Extensions 22 and 23 of the side walls and 24 and 25 of the end walls, when folded along the line 26, provide an overlapping closure 22a for the bottom, and these portions are sealed by means of adhesive applied, as at 27, along the outer edges thereof.

The top closure departs from the usual box cover in the following manner. An extension 28 of the end wall 15 and extensions 29 and 30 of the side walls, when folded along the line 31, overlap to provide a short cover portion indicated generally at 32a. This partial top is glued down along the edges of the portions 29 and 30, as shown at 32 and is preferably of sufficient size to close approximately one half the top opening.

The remaining open portion of the top of the

carton is closed by a cover 33 hingedly attached near the top edge of the end wall 14. This cover 33, along with the arcuately shaped lateral projections 34 and 35, forms a pouring spout. The cover portion 33 comprises an extension of the end wall 14, although a small reinforcement or spacer portion 36 is preferably provided therebetween. This spacer portion has lateral projections 37 and 38 bent over and secured by adhesive to the inner sides of the side walls 12 and 13.

The arcuately shaped side walls 34 and 35 of the spout slide inside the side walls of the carton but on the outside of the inner liner 11, as will be hereinafter described. The outer ends of the spout side walls 34 and 35 have projections 39 and 40 which are adapted to engage the underside of the top wall 29 so as to limit outward movement of the spout. The cover portion 33 of the spout includes an extension 41 adapted to overlap the edge of the solid top 32 and be sealed thereto, by means of adhesive, during packaging.

The edge 42 of the top wall flap 29 preferably extends beyonds the edge of flap 30 and is notched or formed with teeth, as shown, for the purpose of facilitating the tearing of the inner liner, as will be hereinafter explained in greater detail.

The inner liner 11 is constructed of a sheet of moisture resistant material such as waxed paper, folded as shown in Figure 2. The vertical edges are joined together, as at 43, and the top portions 44 and 45 of the side walls 46 and 47 respectively are folded over in overlapping relation as at 48. The top portions 49 and 50 of the end walls are then folded inwardly to overlap the portions 44 and 45 of the side walls. The overlapping joints are preferably sealed by means of hot folding irons in accordance with common practice.

The bottom 51 may also be closed and sealed in the manner just described but, for reasons which will hereinafter become more apparent, I consider it preferable that the inner liner be filled apart from the outer container and through the end 51 which may then be folded or sealed in any suitable manner. The filled liner may then be slid into the outer fiberboard container 10 through the end 22a or the container 10 may actually be wrapped and formed around the liner 11, depending upon the type of equipment available.

In whatever manner the container may be formed, it is a feature of my invention that one of the overlapping end flaps or top portions of the end walls 49 or 50 of the liner be positioned in contact with the inner surface of the cover 33, the cover being closed and sealed at 41.

A spot of adhesive or hot wax, indicated at 52, may be applied to either the inner surface of the cover 33 or the outer surface of the flap 49, to thus secure those two parts together.

The manner of use of the device hereinbefore described and some of its many advantages and features may become more apparent with the following explanation.

The package, filled for example, with dry cereal (for which it is particularly well adapted), may be opened by either breaking the glued joint 41 which secures the pouring spout, or by cutting the cover portion 33 of the spout along the line 53. The free end of the spout may then be lifted upwardly toward the position illustrated in Figures 1 and 3. The overlapping end flap

49 of the liner, being secured to the pouring spout by adhesive, as above described, is raised, unfolded and unsealed when the spout or cover is opened. Continued lifting of the spout results in opening the inner liner somewhat as shown in Figure 2, which permits the contents of the package to be poured out through the opening, the cover member of the package serving as a spout to prevent scattering of the contents.

Closing the package is accomplished by simply lowering the spout. The folds of the inner liner tend to fall back into their original positions and although the liner is not actually resealed, it, along with the hinged spout, serves to effectively exclude moisture from the interior of the package.

The pouring opening available in the inner liner, when constructed as just described, may in some packages, be relatively small, and it is for this reason that the toothed edge 42 is provided on the box top flap 29. When the pouring spout has been raised, as far as the inner liner will permit, the portions 44 and 45 of the overlapping top of the liner are lifted upwardly so as to cause those parts to be torn against the tearing edge 42 and as indicated at 54. When the liner is torn in this manner, the arcuate side walls of the spout hold it in shape.

It should be noted that the top overlapping portions of the liner may be folded in various ways. The creases or folds at 55 and 56 may, for example, fall in place at various angles to the top side edges of the carton. The exact shape in which the top of the liner is folded is determined somewhat by the packaging machinery employed.

In the modified form of my invention illustrated in Figures 5 and 6, the package, as a whole, is very similar to that shown in Figure 1, the major point of difference being that the side walls of the spout, instead of telescoping between the walls of the outer container and liner, are creased and pleated to permit the cover to be folded down to close the box top.

The outer fiberboard container 60 is die-cut as shown in Figure 6 with side and end wall portions 61, 62, 63 and 64 respectively and overlapping lower end extensions 65, 66, 67 and 68 thereof forming the bottom closure 69 for the container. The fixed or permanent portion 70 of the top closure consists of the overlapping extension portions 71, 72 and 73 of the end wall 64 and the side walls 62 and 61.

The pouring spout 74 includes the cover portion 75 which is formed as a continuation of the end wall 63. The pouring spout side walls are formed as extensions of the side walls 61 and 62 respectively and it will be noted that these wings are creased, as indicated by the dashed lines 78 and 79, to facilitate pleating of those members when the top is closed during packaging.

The inner liner 80 is formed of material such as waxed paper as hereinbefore described. In this embodiment of my invention, however, it is believed preferable that the liner be placed in the outer box 60 before filling, after which the end flap 71 may be turned down and then the top flaps 72, 73 and the cover 75 in the order given, those members having previously received an application of adhesive, as indicated at 81.

It may now be understood that the top closure portions 82 of the liner will adhere to the inner sides of adjacent cover portions and the liner may be closed simultaneously with the outer cover.

When the pouring spout 74 of the outer con-

tainer is raised, in opening the package, the adjacent portion of the liner is also raised and opened to form a spout liner. Since the side wall portions 82 of the spout liner are cemented to the wings or side walls of the pouring spout, the top overlapping portions of the liner will tear readily along the toothed tearing edge 83 to permit the spout to open fully to the position illustrated in Figure 5.

A carton or package such as I have herein described is well suited to the packaging of many dry commodities, but especially well adapted for dry cereals.

The package provides not only a neat, efficient way of dispensing cereals and a quick and easy method of opening and closing the package, but provides means, operable by the closing of the carton top, for resealing the liner as well as the outer package.

Although I have described specific embodiments of my invention, it is apparent that modifications thereof may be made by those skilled in the art. Such modifications may be made without departing from the spirit and scope of my invention as set forth in the appended claims.

I claim as my invention:

1. In a carton, the combination comprising an outer container having a pouring spout hingedly attached thereto in one end thereof, an inner liner having portions at one end thereof, folded over in overlapping relation for sealing purposes, and means for securing an outer and adjacent one of said overlapping folded portions to said pouring spout whereby the last mentioned overlapping folded portion will be raised and the inner liner partially opened upon lifting and opening of the pouring spout.

2. In a carton, an outer container including a pouring spout formed as a portion of the top wall thereof, the pouring spout having generally arcuately shaped side wall portions slidable within the side walls of the container, and stop means for limiting outward opening movement of the spout, an inner liner having the top portions of the side walls thereof folded over into overlapping relation and having the top portions of the end walls thereof folded over into overlapping relation with the first mentioned folded portions, and means securing one of the folded portions of an end wall to the inner surface of the pouring spout.

3. In a carton, an outer container including a pouring spout formed integral with one wall thereof and hingedly connected adjacent one edge thereof, an inner liner having the top edge portions thereof folded over in overlapping relation, one of said overlapping edge portions being disposed adjacent the inner surface of said spout, and means securing the last mentioned edge portion of the inner liner to the inner surface of said spout, whereby raising and opening of said spout will lift the attached portion of the inner liner and at least partially open the overlapping portions thereof adjacent the spout.

4. A carton for dry materials comprising an outer box-like container and a bag-like inner liner received therein, the bag-like inner liner having the top side edges thereof folded inwardly in overlapping relation and the top end edges folded inwardly in overlapping relation with the top side edges, the outer container characterized by an opening in the top thereof adjacent one of said overlapping top end edges, and a pouring spout hingedly mounted to close said opening, the said spout having side walls slidable between the outer container and the inner liner, and means com-

prising a spot of adhesive material for securing the inner surface of the spout to the outer surface of the said adjacent overlapping top end edge of the inner liner.

5. A carton for dry materials comprising an outer box-like container and a bag-like inner liner received therein, the inner liner having the top edges thereof folded over in overlapping relation, the outer container having an opening in the top thereof adjacent an overlapping portion of the inner liner and having a pouring spout formed as a continuation of one of the side walls of said outer container, and adhesive means applied between the adjoining surfaces of the pouring spout and the adjacent overlapping portion of the inner liner.

6. In a carton, the combination comprising an outer container having a pouring spout hingedly attached thereto to cover an opening in the top thereof, an inner liner having portions at the top thereof folded over in overlapping relation for sealing purposes, and means securing an outer and adjacent one of said overlapping folded portions to said pouring spout, whereby the last mentioned folded portion will be raised and the inner liner at least partially opened upon lifting and opening of the pouring spout and the top having a tearing edge against which portions of the inner liner may be torn, said tearing edge defining the edge of the opening opposite the hinged portion of the pouring spout.

7. The combination, in a package, of an outer container having a discharge opening therein, a pouring spout hingedly attached to said container to cover the discharge opening, and an inner liner having a portion thereof secured to the inner side of the pouring spout, one of the edges defining the discharge opening of the outer container having a toothed portion against which the adjacent portion of the inner liner may be torn.

8. In a carton, the combination, comprising an outer container having a pouring spout hingedly attached thereto in the upper end thereof, an inner liner having upper end portions thereof folded over, a folded portion of said inner liner being secured to the inner side of the said pouring spout whereby raising of the pouring spout will unfold the inner liner.

9. In combination, an outer carton having side, end, top and bottom walls, the top wall including a portion adapted to open up and serve as a pouring spout, the said spout having cover and wing portions formed as extensions of the end and side walls respectively, the said wing portions being pleated to permit closing of the cover portion, and an inner liner having a folded top closure, a portion of said folded top closure being secured to the inner surface of said cover portion whereby the top closure of the inner liner will be opened simultaneously with the pouring spout.

ROBERT F. MCGINNIS.

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