

April 16, 1968

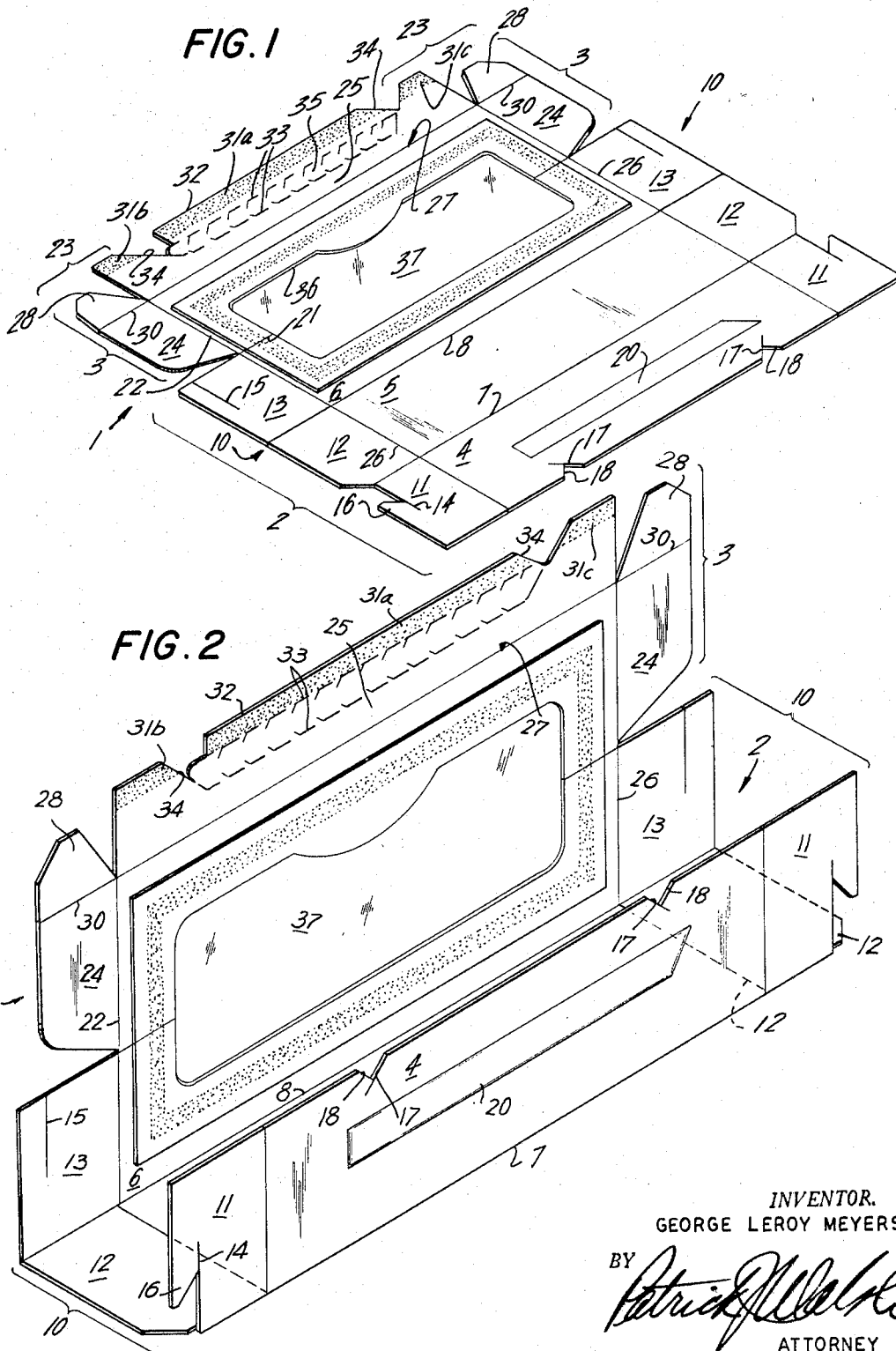
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3,378,188

CARTON

Filed Nov. 25, 1966

5 Sheets-Sheet 1



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FIG. 3

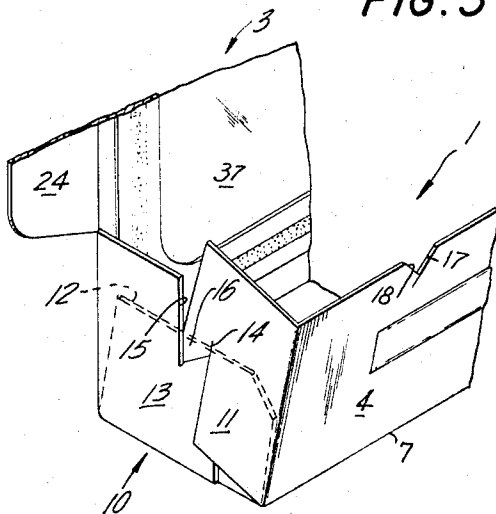


FIG. 4

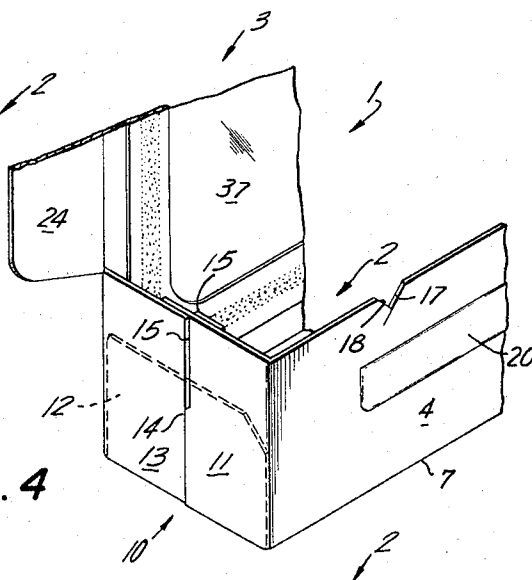
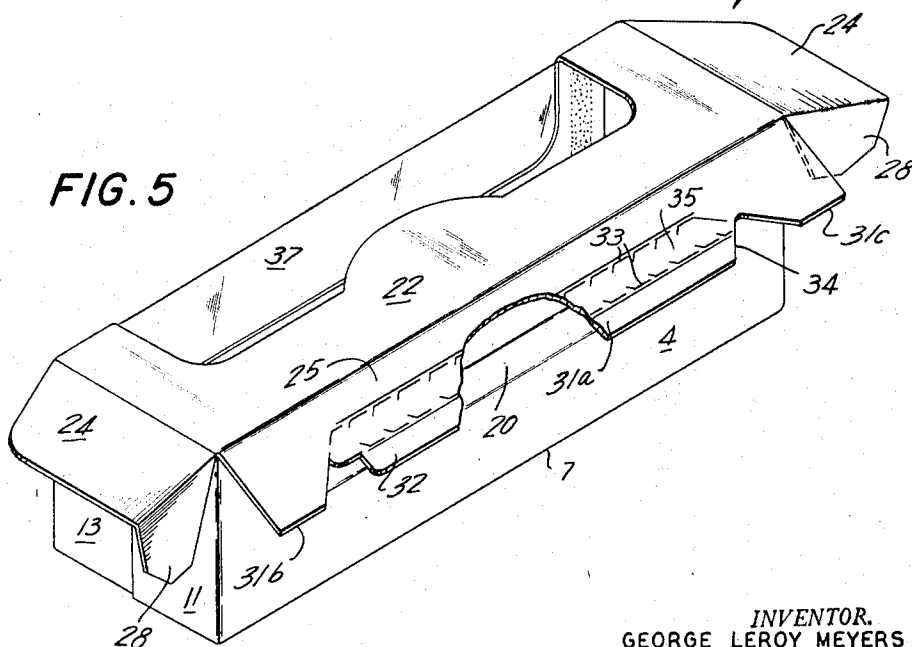


FIG. 5



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FIG. 6

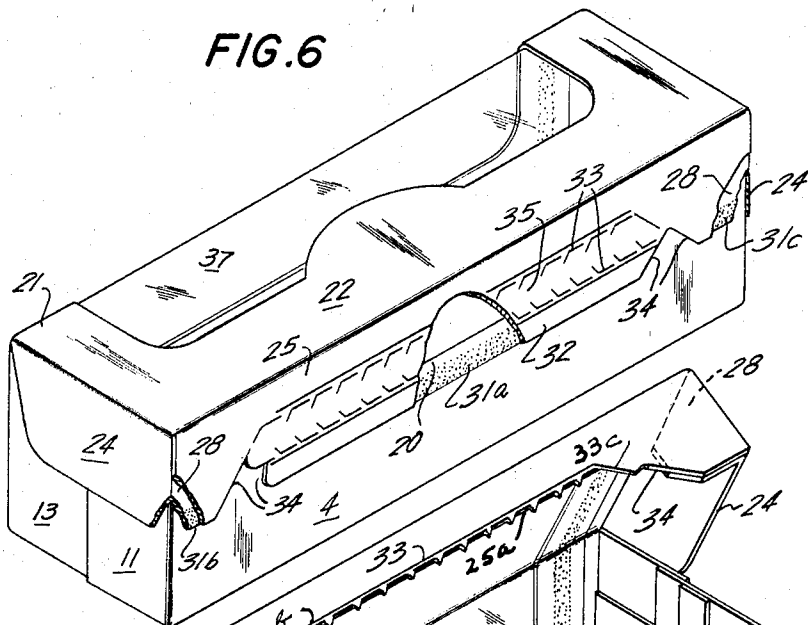


FIG. 7

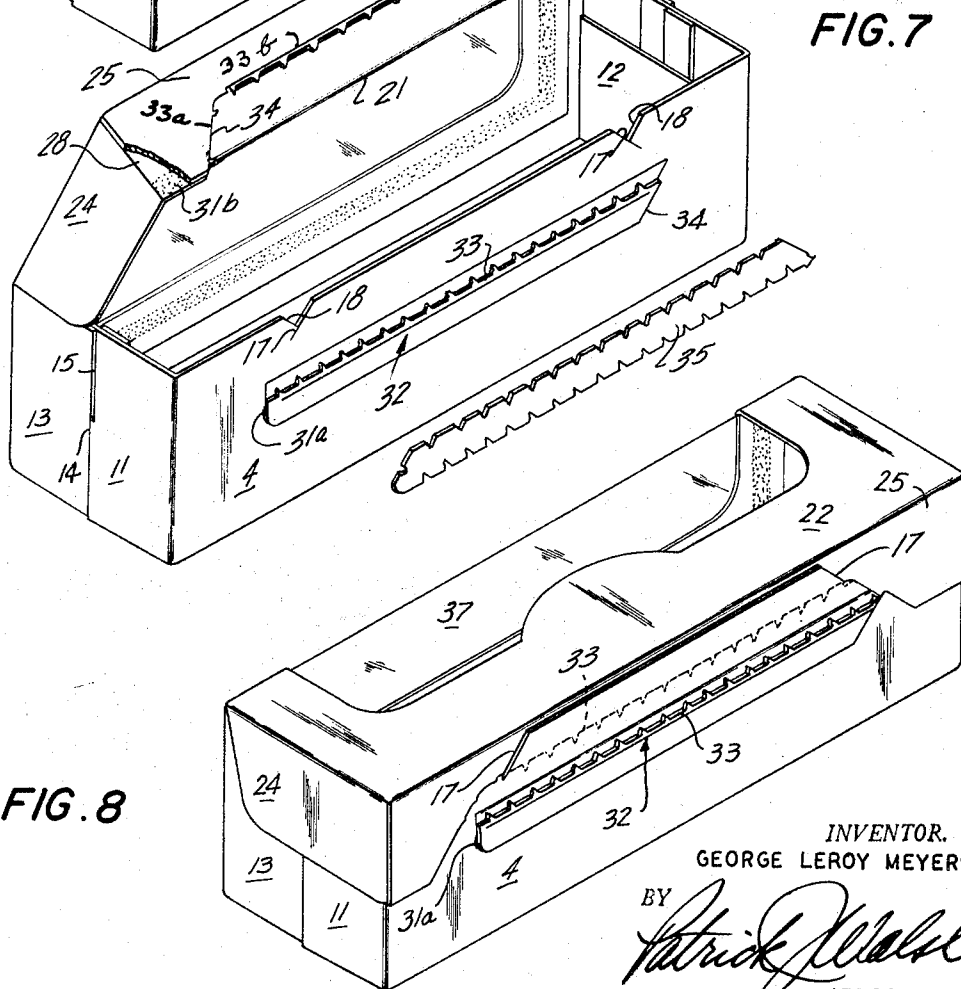


FIG. 8

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FIG. 10

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FIG. 11

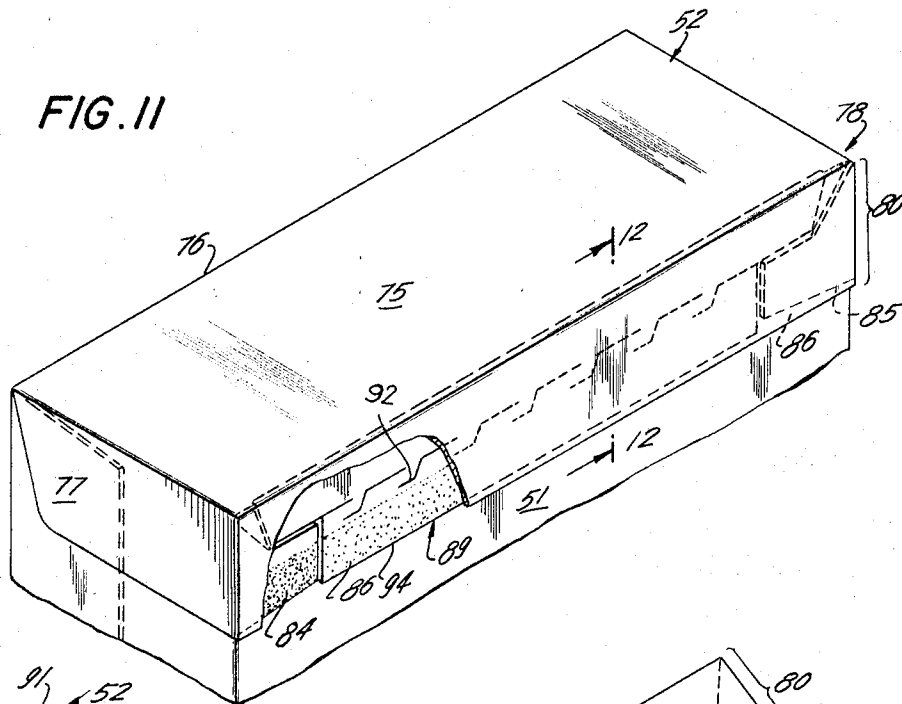


FIG. 12

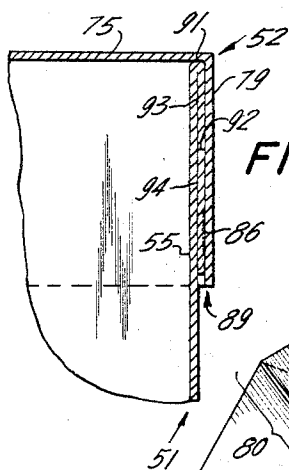
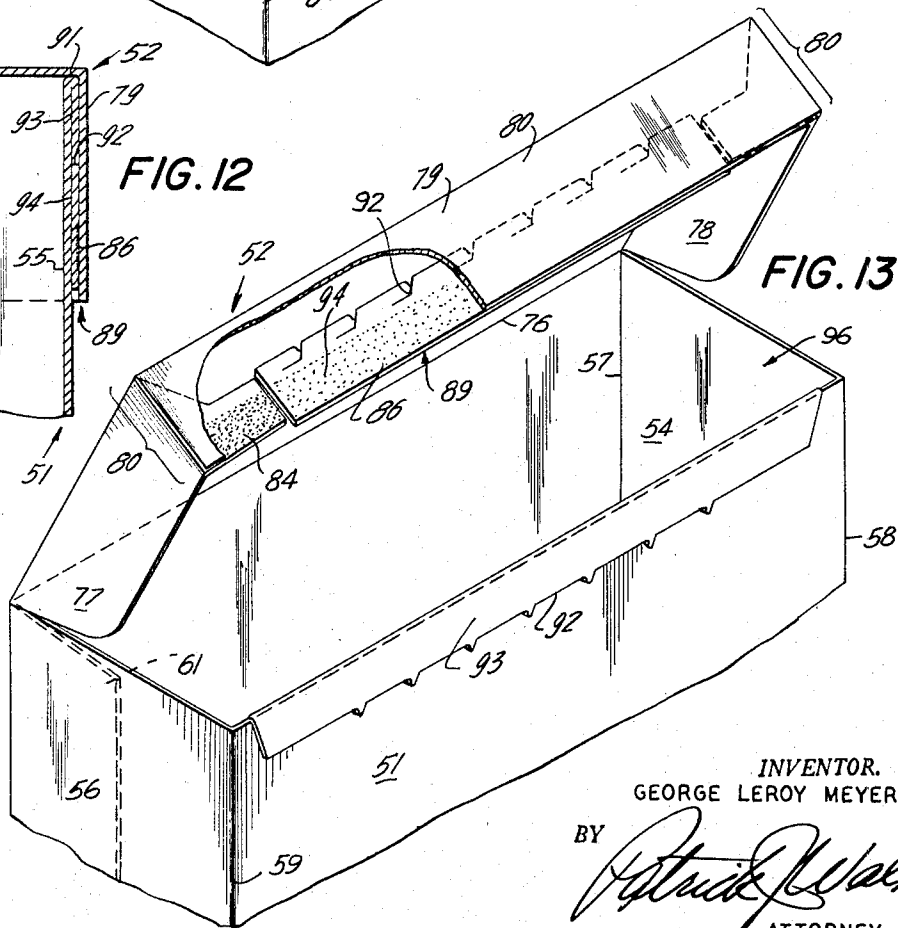


FIG. 13



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3,378,188
CARTON

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Filed Nov. 25, 1966, Ser. No. 596,937
4 Claims. (Cl. 229—51)

ABSTRACT OF THE DISCLOSURE

A blank of material preferably paperboard is cut and creased to form a carton, the carton when formed includes a receptacle and a hooded style cover which telescopes over the upper portion of the receptacle. A strip of adhesive is applied to the depending front cover panel for forming the hooded cover and for sealing the cover to the receptacle front wall.

The present invention relates to containers and more particularly to a carton of new and improved construction.

According to present practice, cartons are made of sheet material, usually paperboard, and include a receptacle portion for receiving a suitable product such as doughnuts and a cover portion for closing the receptacle. Typically, the cover includes a depending skirt which telescopes over the upper portion of the receptacle. Usually, the cover is sealed to the receptacle in this telescoped position. After opening, the cover retains its shape and the cover may be re-used for reclosing the carton.

The present invention includes improvements in the construction of this type of carton. According to the present invention, a single strip of adhesive forms the cover and seals the carton. The carton further includes an easy opening feature. After opening, the cover retains its shape and may be used to effectively reclose the carton.

Accordingly it is an object of the present invention to provide a carton blank which may be formed into a carton having a cover with a depending skirt portion.

Another object of the present invention is to provide a carton which has an easily formed cover which may be reclosed after opening of the carton.

Another object of the present invention is to provide an easy opening feature for breaking the seal between the cover and the receptacle portions of the carton.

Another object of the present invention is to provide a reclosure lock for retaining the reclosed cover in position with respect to the receptacle.

Other and further objects of the present invention will become apparent upon an understanding of the preferred embodiment about to be described or will occur to one skilled in the art upon employment of the invention in practice.

A preferred embodiment of the invention has been selected for purposes of describing and illustrating the principles of the invention and is shown in the accompanying drawings wherein:

FIG. 1 is a perspective view of a carton blank according to the present invention;

FIG. 2 is a perspective view of the carton blank of FIG. 1 as a partially formed carton;

FIGS. 3 and 4 are fragmentary views illustrating the sequence of forming the preferred end closure for the carton of the present invention;

FIG. 5 is a perspective view of the carton of FIGS. 1-4 illustrating in particular the manner for forming the cover portion of the carton;

FIG. 6 is a perspective view illustrating a sealed carton according to the present invention;

FIG. 7 is a perspective view illustrating the carton in FIG. 6 after opening;

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FIG. 8 is a perspective view of the carton of FIG. 7 after reclosing;

FIG. 9 is a perspective view of a modified carton blank according to the present invention;

FIG. 10 is a perspective view of the blank of FIG. 9 after the receptacle has been formed;

FIG. 11 is a perspective view, partially broken away, illustrating the carton of FIG. 9, when sealed;

FIG. 12 is a section view taken along line 12—12 of FIG. 11; and

FIG. 13 is a perspective view, partially broken away, of the carton of FIG. 11 after opening.

Referring now to FIG. 1, the preferred embodiment of the carton blank 1 includes a receptacle portion 2 and a cover portion 3.

The receptacle portion includes front 4, bottom 5 and rear 6 walls connected by scored lines 7 and 8. An end closure 10 for each end of the receptacle portion comprises three flaps 11-13 connected respectively to the front, bottom and rear walls. Preferably, the front and rear wall closure flaps have corresponding slits 14 and 15 for securing the end closure. If desired, the end closure flap 11 may include a pointed tab 16 for easy assembly of the end closure. As shown in FIG. 1, the front wall 4 of the receptacle may include a pair of reclosure slits 17 to retain the reclosed cover (FIG. 8). Each slit 17 may be notched 18 for easy reclosure of the cover. The front wall 4 also includes an embossed area 20 which aids sealing the cover 3 to the receptacle 2 of the carton.

The cover portion 3 of the carton blank joins the receptacle at the upper end of the rear wall 6 by a suitable scored line 21. The cover includes a top panel 22 and a depending skirt 23. A pair of side skirt panels 24 and a front closure panel 25 join the top panel by scored lines 26 and 27 and together define the skirt 23. A pair of corner panels 28 are hingedly connected by scored lines 30 to the side skirt panels 24 for joining the side skirt panels to the front closure panel. The front closure panel 25 includes an adhesive strip which is divided into three segments 31a, 31b, 31c. The outer adhesive segments 31b and 31c cooperate with the corner flaps 28 to secure together the depending skirt portions of the cover 3. The intermediate adhesive segment 31a is located on a sealing strip 32 which cooperates with the embossed area 20 of the front wall of the receptacle for sealing the cover to the receptacle. The front closure panel also includes means for opening the cover from the receptacle. Preferably, a pair of spaced lines of weakness 33 between suitable notches 34 define a removable strip or zipper 35 for separating the cover 3 from the sealing strip 32. After removal of the zipper, the carton cover may be readily opened.

If desired, the carton may include a window 36 covered by a suitable sheet material 37, such as cellophane. This construction is commonly used in display cartons for packaging doughnuts.

FIGS. 2 through 6 illustrate in sequence the formation of the carton from the blank. These figures and the accompanying description provide a better understanding of the present invention.

In FIG. 2, the receptacle 2 is formed by erecting the front and rear walls 4 and 6 about the scored lines 7 and 8. The receptacle is completed by formation of the end closures 10 as illustrated in FIGS. 3 and 4. To form each end closure, the bottom wall flap 12 is first folded up toward the receptacle. Next, the slotted front and rear flaps 11 and 13 are interconnected slot-by-slot as illustrated in FIG. 3. The pointed tab 16 facilitates this slot-by-slot connection. After interconnection, the end closure appears as is illustrated in FIG. 4. The formation of the end closure may be accomplished by hand or by suitable machinery.

After formation of the receptacle, the carton may be filled with a suitable product, such as doughnuts. Filling may be accomplished by suitable packaging machinery.

The cover portion 3 of the carton (FIG. 5) is formed by folding the side skirt panels 24 into position with the corner flaps 28 underlying the outer strips of adhesive 31b and 31c on the front closure panel 25. The pre-applied adhesive may be activated in any suitable manner, as for example, by application of hot air. The corner flaps 28 and the outer strips of adhesive 31b and 31c form each corner joint of the side skirt panel 24 and the front closure panel 25. The adhesive 31a on the sealing strip 32 secures the cover to the receptacle at the embossed area 20.

It will be observed by the broken away portions in FIG. 6, that the outer strips of adhesive 31b and 31c adhere only the corner flaps 28 to the front closure panel of the cover. The intermediate strip of adhesive 31a on the underside of the sealing strip 32 adheres only to the front wall of the receptacle 4. The zipper 35, which is defined by the spaced lines of weakness 34, provides for separation of the cover 3 from the sealing strip 32. After the zipper 35 is removed, the cover 3 may be freely lifted to open the receptacle as shown in FIG. 7. After the zipper 35 is removed the front closure panel 25 has a recessed portion 25a, defined by the line of weakness 33, having a first leg 33a, an intermediate leg 33b and a third leg 33c.

For reclosure, the front closure panel 25 cooperates with the spaced slits 17 and notches 18 in the front wall 4 as illustrated in FIG. 8. The spaced slits retain the cover portion in a reclosed position. The notches 34 guide the front closure panel 25 into position in the cover retaining slits 17.

Referring now to FIGS. 9-13, a modified embodiment of the present invention will be described.

In FIG. 9, the carton blank 50 includes a receptacle portion 51 and a cover portion 52. The receptacle includes rear 53, side 54, front 55, and side 56 panels hingedly connected across scored lines 57-59. A glue flap 61 connected by a scored line 62 to the rear panel may be secured to the side wall 56 to form the side seam joint 63 (FIG. 10) for the receptacle. A bottom closure 64 for the receptacle comprises flaps 65-68 connected by scored lines 71-74 respectively to the main receptacle panels 53-56.

The cover portion 52 of the blank includes a top panel 75 connected by a scored line 76 to the receptacle at the upper edge of the rear panel 53. A pair of side cover panels 77 and 78 and a front cover panel 79 (connected to the top panel by scored lines 81-83) define a depending skirt portion 80 (FIGS. 11 and 13) of the cover when the cover has been formed. A pair of corner flaps 84 and 85 secure the side cover panels 77 and 78 to the front cover panel 79 when the cover has been formed. The corner flaps 84 and 85 are connected to the side cover panels by means of scored lines 84a and 85a. A strip of adhesive 86 lies along the marginal edge of the front cover panel and the terminal portions 87 and 88 of this adhesive strip cooperate with the corner flaps 84 and 85 in forming the skirt portion of the cover. The adhesive strip 86 may be pre-applied to the blank, or may be applied just prior to formation of the cover.

The adhesive strip 86 also serves to secure the cover to the receptacle by means of a supplemental tamperproof panel 89. As disclosed in my United States Patent No. 3,191,848, the supplemental panel 89 may be hingedly connected by a scored line 91 to the front receptacle panel. The supplemental panel 89 is divided by a line of weakness 92 into an inner strip 93 and an outer strip 94. The supplemental panel is recessed at 91a and 91b to accommodate the corner flaps 84 and 85. As more fully explained below, the supplemental panel 89 provides for a tamperproof carton which may be relocked after opening.

In FIG. 10, the receptacle portion 51 of the carton 95 may be formed by joining together in a side seam 63 both the glue flap 61 and the side panel 56. The supplemental panel 89 overlies the front wall 55 in position to be secured to the front cover panel 79. The carton as shown in FIG. 10 may be filled through the open top 96.

To form the cover portion 52 of the carton 95 (FIGS. 10 and 11), the top panel 75 pivots at its scored line 76 into position over the top 96 of the carton. Next, the side cover panels 77 and 78 and the corner flaps 84 and 85 move into position in depending relation from the top panel 75. Then the front cover panel 79 (with its adhesive 86 activated as by hot air) moves into depending relation to the top cover panel 75. The adhesive strip 86 secures the front cover panel 79 to the side cover panels 77 and 78 at the corner flaps 84 and 85. The adhesive strip 86 also secures the front cover panel 79 to the outer portion 94 of the supplemental panel 89. Thus the cover 52 is formed and secured to the receptacle 51 by a single strip of adhesive 86.

As illustrated in FIG. 12, the supplemental panel 89 secures the cover 52 to the receptacle 51. To open the carton, the supplemental panel 89 separates along the line of weakness 92. This severance is shown in FIG. 13. For reclosure the edges of the supplemental panels 93 and 94 abut each other to retain the cover 52 in telescoping relation to the receptacle 51.

It will be seen that applicant has invented an improved carton construction. The cover portion of the carton is easy to form by means of a single straight line strip of adhesive. The same adhesive provides for sealing of the carton of the receptacle. The cover may easily be opened by a conveniently located line of weakness. The cover retains its form after opening and may be used to reclose the carton.

Various changes may be made to the form of the preferred embodiment of this invention without changing the principles of this invention. The foregoing embodiment is to be interpreted in an illustrative and not in a limiting sense.

Having thus defined my invention, I claim:

1. A carton comprising a receptacle portion and a cover portion, the receptacle portion having front, bottom and rear walls, means for closing each end of the receptacle, the cover portion having a top panel hingedly connected to the rear wall of the receptacle, a depending front closure panel hingedly connected to the front edge of the top panel, the front closure panel having a sealing strip for securing the front closure panel to the front receptacle wall, a line of weakness for separating the sealing strip from the remainder of the front closure panel thereby to open the carton, the line of weakness including a first leg extending toward the front edge of the top panel, an intermediate leg extending in generally parallel relation to the front edge of the top panel, and a third leg extending from the intermediate leg in a direction away from said front edge, said line of weakness thereby defining a recess in the front closure panel after the line is broken, a pair of slits in the front wall of the receptacle, said slits communicating with the top edge of the front wall of the receptacle and being in spaced relation to each other to register with the intermediate leg of the line of weakness and to receive and to hold the front closure panel in relocking engagement with respect to said receptacle.

2. The carton as defined in claim 1 which further includes a second line of weakness for cooperating with the first line of weakness to define a zipper for opening the front closure panel.

3. A blank for forming a carton comprising a receptacle portion and a cover portion, the receptacle portion having panel means for forming front, bottom, end and rear walls, the cover portion having a top panel connected to the upper edge of the rear receptacle wall, a front closure panel connected to the front edge of the

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top panel, a pair of end panels connected to the opposite end edges of the top panel, each end panel having a corner flap connected to the front edge of each end panel for securing the end panels to the front closure panel, the front closure panel having a free marginal edge for receiving a strip of adhesive for sealing the front closure panel to the receptacle front wall and for joining the front closure panel to the intumed corner flaps thereby to form a skirt for the cover, a pair of notches cut into the marginal edge of the front closure panel to define a pair of outer segments along said marginal edge each notch being so located to define an outer segment which is entirely overlapped by its corner flap when the cover is formed, an intermediate segment between said notches for securing the front closure panel to the receptacle front wall, and a line of weakness for separating the intermediate segment from the remainder of the front closure panel.

4. A carton comprising a receptacle having means for forming front, rear, and bottom walls and a pair of end walls to define the receptacle portion and a cover including a top panel connected to the upper edge of the rear wall, a pair of end cover panels each connected in depending relation to an end edge of the top panel, a front cover panel connected to the front edge of the top panel, a pair of corner flaps connected to the front edge of each end cover panel and adapted to lie between the front wall

of the receptacle and the front cover panel for securing the end panels to the cover front panel, a supplemental panel connected by a score line to the upper edge of the receptacle front wall and being disposed between the receptacle front wall and the front cover panel, the supplemental panel being recessed at its opposed marginal edges to accommodate and to lie in a common plane with the corner flaps, a strip of adhesive on the cover front panel adjacent the free edge of such panel and extending substantially one full dimension of the cover front panel whereby the strip of adhesive may secure the cover front panel to each corner flap and to a lower marginal portion of the supplemental panel, and a line of weakness in the supplemental panel whereby the lower portion of the supplemental panel may be separated from the upper portion for opening the carton.

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25 DAVID M. BOCKENEK, *Primary Examiner*.