April 21, 1964 L. E. KIRKWOOD ETAL 3,129,869

DISPENSING CONTAINER

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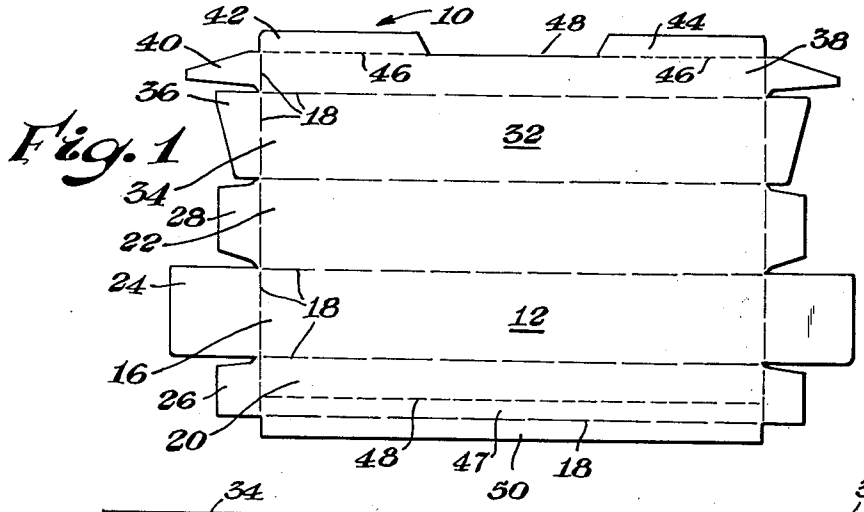


Fig. 1

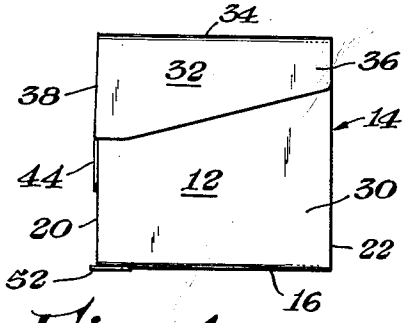


Fig. 4

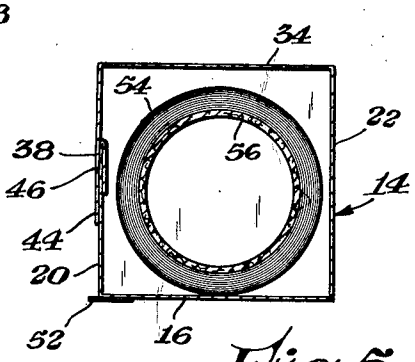
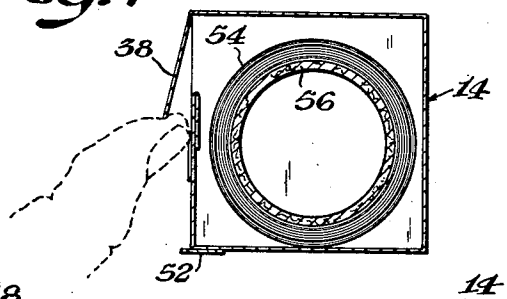


Fig. 5

Fig. 7



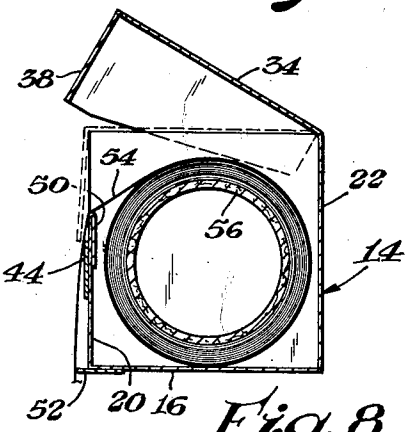


Fig. 8

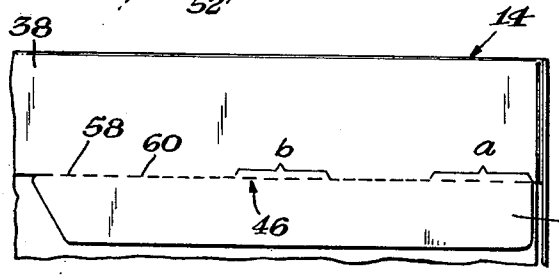


Fig. 6

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DISPENSING CONTAINER

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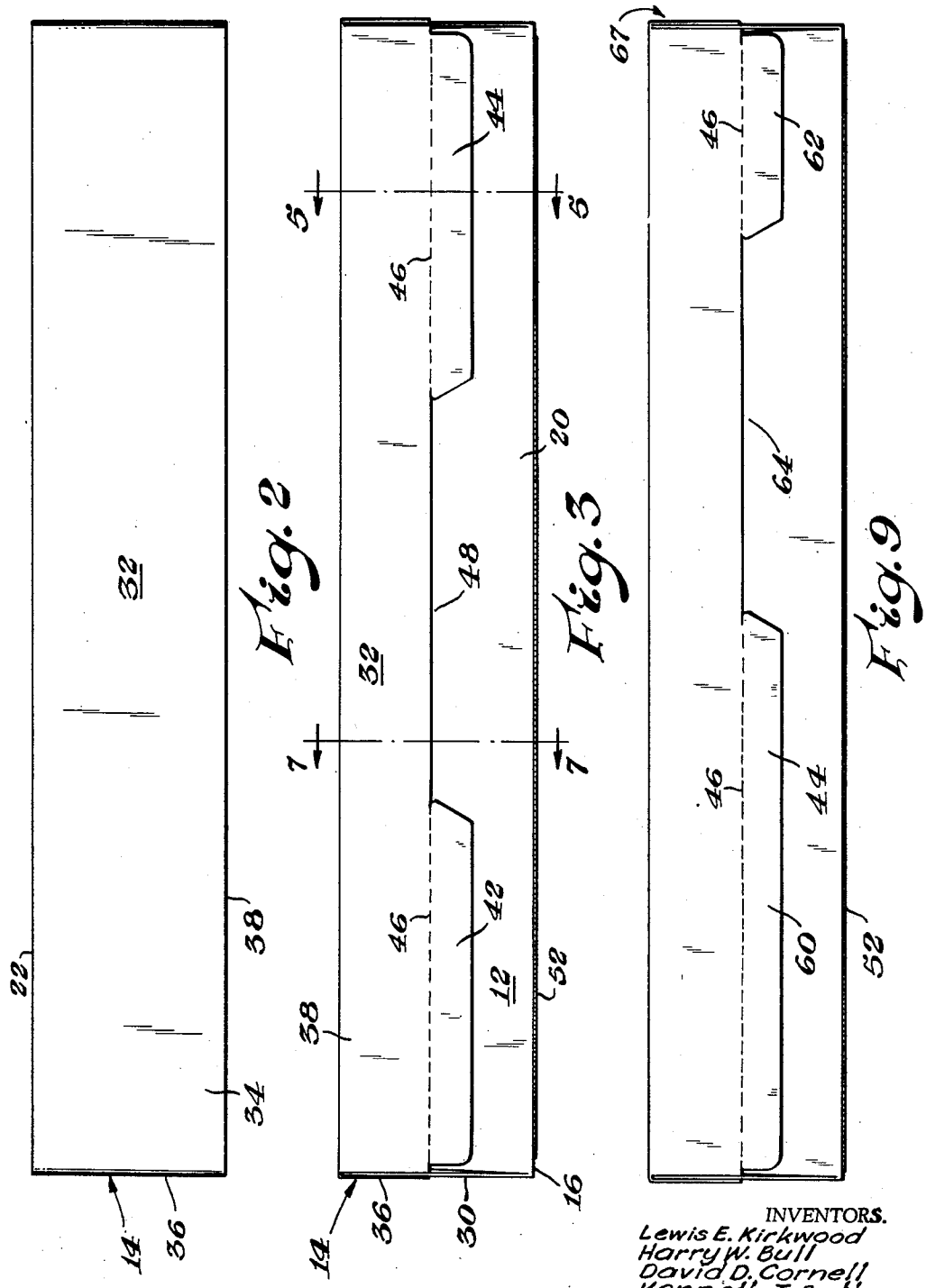

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DISPENSING CONTAINER

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This invention generally relates to a dispensing container or carton for thin sheet material and, more particularly, relates to an improved dispensing container which makes use of a novel perforated seam construction positioned in a manner such that the container can be readily opened through a pulling action.

It has been conventional in designing cartons for elongated rolls of thin sheet material, such as a roll of polymeric film, to use similarly elongated rectangular trunk-lid style folding cartons. A common disadvantage of such trunk-lid style cartons is the burdensome degree of difficulty the user experiences in attempting to open such a carton construction preparatory to using the product it contains. Where glue spots and perforations have been used previously, they have not allowed the carton to be correctly opened without a substantial measure of difficulty, or without tearing, maiming, or otherwise defacing the carton itself.

Accordingly, it is an object of the present invention to provide a trunk-lid style carton which may be readily and easily opened through a pulling action.

Another object of the present invention is to provide a trunk-lid style carton and product which is delivered to the consumer in a substantially sealed condition.

It is a further object of the present invention to provide a trunk-lid style carton which can be readily and easily opened upon application of pressure no matter how inaptly that pressure is applied.

Still another object of the present invention is to provide a novel perforated seam arrangement for trunk-lid style cartons which can be easily opened without tearing, maiming, or otherwise defacing the carton itself.

A still further object of the present invention is to provide a novel variation of land and cut areas along a perforated seam for trunk-lid style cartons which can be readily opened through a pulling action.

Briefly then, the present invention relates to a novel trunk-lid style carton wherein a perforated seam is formed between a front flange of a lid member and a front panel of the body of the carton such that insertion of fingers or other objects under the front flange in a cutout area of the flange along that seam results in an opening of the carton when a pulling pressure is applied.

Yet additional objects and advantages of the present invention, and its numerous cognate benefits and features are even more apparent and manifest in and by the ensuing description and specification taken in conjunction with the accompanying drawing in which wheresoever possible, like characters of reference designate corresponding material and parts throughout the several views thereof, in which:

FIGURE 1 is a plan view of a blank as cut, scored and perforated, and from which a trunk-lid style container is formed according to the principles of the present invention;

FIGURE 2 is an enlarged top plan view of a container formed from the blank of FIGURE 1;

FIGURE 3 is a front elevational view of the container;

FIGURE 4 is an end elevational view of the container;

FIGURE 5 is a cross-sectional view of the container taken along the reference line 5—5 of FIGURE 3;

FIGURE 6 is an enlarged view of one end of the container as viewed in FIGURE 3, illustrating the perforations more in detail;

FIGURE 7 is a cross-sectional view of the container as it is about to be opened, taken along reference line 7—7 of FIGURE 3;

FIGURE 8 is a cross-sectional view similar to FIGURE 5 only taken after the lid member of the container is opened; and

FIGURE 9 is a front elevational view similar to FIGURE 3, only of a modified container structure.

Blank 10 for a trunk-lid style container can be formed of any suitable sheet material, such as paperboard, fiberboard, or any other such material. Referring more particularly to FIGURE 1, hollow body or box portion 12 of a carton or container 14 (FIGURE 2, for example) comprises a bottom panel 16 having joined thereto, along a score line 18, a front panel 20, and along another score line 18, a rear panel 22. Also connected to the bottom panel, front panel, and rear panel, are opposite end flaps 24, 26, and 28, respectively, for forming end panels 30 (FIGURE 4, for example) of the container 14. These flaps are connected to their adjacent panel at additional score lines 18. A lid member 32 of the blank 10 is formed of a top panel 34 hingedly connected to rear panel 22 along yet another score line 18. Also forming parts of the lid member 32 are opposite side flanges 36 and a front flange 38, each connected to top panel 34 along other score lines 18. Joined on opposite sides of the front flange 38 are flaps 40 also joined by score lines 18. A lip 42 and a lip 44 are formed out of part of front flange 38 by the perforated seam 46 and the cut-out portion 48 along one edge of that flange.

In forming the container 14, front lips 42 and 44 are folded upon front panel 20 such that they coincide with the area 47 defined by imaginary line 48 formed on front flange 20 such that their sides opposite from that shown in FIGURE 1 are glued or otherwise secured to the side of front panel 20 illustrated in FIGURE 1.

Container 14 is further assembled by folding along each of its remaining score lines 18 such that flaps 26 and 28 are glued or otherwise secured to the inside of flap 24 and flaps 40 are glued or otherwise secured to the inside of flaps 26, with corresponding score lines coinciding.

If desired, an additional front flange 50 can be formed on the blank 10 to provide a reinforced edge on the front panel 20. It is attached to the upper part of front panel 20 along another score line 18 so that both of their surfaces opposite from that shown in FIGURE 2 are glued or otherwise secured together. This serves to provide a smooth rounded edge over which the film can pass and serves, in combination with the lips 42 and 44 which remain secured to front panel 20, to reinforce front panel 20 which is subjected to stresses when film is passed thereover. Of course, lips 42 and 44 would still reinforce front panel 20 even if a flange 50 is not employed in a particular carton design.

It is understood that in employing a tube style carton blank, as illustrated in FIGURE 1, that the previously formed carton blank is normally erected by machine (not shown and not forming a part of the present invention) which inserts the roll of film, and then folds and glues the carton end flaps, this resulting in a completed package.

FIGURES 2 to 5 illustrate the complete carton 14 including lid member 32 and panels 30 and body portion 12. Lid member 32 is illustrated as including a top rectangular panel 34 generally of the same, although of a somewhat larger configuration than that of body portion 12. Extending downwardly towards the bottom of the carton 14 are the opposite end flanges or sides 36 and the front flange 38 and lips 42 and 44 of the lid member 32. Body portion 12 contains front panel 20, opposite end panels

30, bottom panel 16, and rear panel 22. A cutter blade 52 along bottom panel 16 can be added for tearing film 54 from a roll 56.

Referring more particularly to FIGURES 3, 6, and 7, upon a close examination of perforated seam 46, as enlarged in FIGURE 6, it can be seen that it consists of a specially designed series of cut areas or perforations 58 and land areas 60 in a linear configuration. Of course, cut-out portion or space 48 forms a complete separation between lips 42 and 44. The main pulling area for opening the carton is that under front flange 38 directly above space 48 as best illustrated in FIGURE 7. The perforations are so formed that the land areas along seam 46 decrease, and the cut areas correspondingly increase, along parts thereof progressively more remote from the main pulling area adjacent space 48. This general arrangement is followed except for two optional modifications. One modification is that more land area is formed in the seam 46 adjacent the end portions *a* of a carton seam to have a stable construction to resist tearing during machine set up of the carton and loading of the roll 56. Another modification is that when the carton blank is erected some bowing near the center portions *b* of the lip portions occurs so that it may be desirable to slightly increase the land area near the central portion of the seam. However, it must be emphasized that the general principle to be followed is that the land area is decreased and the degree of perforations is increased as the seam 46 progresses away from the main pulling area since the effect of a force applied against the seam adjacent space 48 decreases along the more remote or endward areas of that seam. To decrease the land area, one may either increase the length of the cut areas or decrease the land area between the cut areas. Both principles are applied in the perforated seam 46. Conversely, to increase the land area, one can either decrease the length of each cut area or decrease the distance between the cut areas, or both.

Carton 14, after it is opened, is illustrated in FIGURE 8 to show how the film 54 is brought over the top of the front panel 20 and down around the cutting blade 52 along which it can be readily torn after the desired quantity of film has been removed. It is noted particularly here that the lips such as 44, remain attached to front panel 20 after the lid member 32 has been separated from body portion 12 to provide the advantages heretofore discussed.

A modification of the present invention is illustrated in FIGURE 9 wherein equally sized lip portions 42 and 44 of carton 14 are replaced by unequally sized lip portions 60 and 62 on each side of a space or cut-out area 64 in modified carton 67. In the same fashion as described before seam 46 employs the principles of decreasing the land areas as the portions of the seam become more remote from the main pulling area of the carton. Of course, because of the different sizes of the lips 60 and 62 some modifications such as in the areas *a* and *b* of FIGURE 6 can be changed. As an example, an area such as area *b* of FIGURE 6 may not be necessary on such a short seam as associated with lip 62 of FIGURE 9. The particular arrangement of carton 67 can be used if desired rather than the carton 14 for aesthetic reasons or for graphic representation purposes.

While certain representative embodiments and details have been shown for the purpose of illustrating the invention, it will be apparent to those skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope of the invention.

Accordingly, what is claimed as new is:

1. A dispensing container comprising a hollow body portion including a front panel and a rear panel, a lid member hingedly attached to said rear panel and including a top panel having a flange overlapping said front panel, said flange extending a given distance downwardly from the top of said front panel, a lengthy portion of said flange being cut away intermediate its ends from the bottom thereof and to a heighth less than said given distance to divide the part of the flange overlapping said front panel into a plurality of spaced lips joined by a remaining connecting portion of said flange, a perforated tearing seam along the length of each of said lips, said lips below said seam being secured to said front panel, whereupon pressure applied to said connecting portion of said flange in a direction generally away from said front panel results in a separation of the lid member from the body portion along said seams.

2. A dispensing container comprising a hollow body portion including a front panel and a rear panel, a lid member hingedly attached to said rear panel and including a top panel having a flange overlapping said front panel, said flange extending a given distance downwardly from the top of said front panel, a lengthy portion of said flange being cut away intermediate its ends from the bottom thereof and to a heighth less than said given distance to divide the part of the flange overlapping said front panel into a plurality of spaced lips joined by a remaining connecting portion of said flange, a perforated tearing seam along the length of each of said lips, the land area of each perforated seam generally decreasing along the parts thereof becoming progressively more remote from the cut-away portion of the flange, said lips below said seams being secured to said front panel, whereupon pressure applied to said connecting portion of said flange in a direction generally away from said front panel results in a separation of the lid member from the body portion along said seams.

3. A dispensing container comprising a hollow body portion including a front panel and a rear panel, a lid member hingedly attached to said rear panel and including a top panel having a flange overlapping said front panel, said flange extending a given distance downwardly from the top of said front panel, a lengthy portion of said flange being cut away intermediate its ends from the bottom thereof and to a heighth less than said given distance to divide the part of the flange overlapping said front panel into a plurality of spaced lips joined by a remaining connecting portion of said flange, a perforated tearing seam along the length of each of said lips, the land area of each perforated seam being of a varying pattern where the land area thereof is generally larger adjacent the ends of the seam and at parts thereof having a tendency to bow outwardly from said front panel, the remaining land area of each perforated seam decreasing along the parts thereof becoming progressively more remote from the cut-away portion of the flange, said lips below said seams being secured to said front panel, whereupon pressure applied to said connecting portion of said flange in a direction generally away from said front panel results in a separation of the lid member from the body portion along said seams.

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