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3,178,086

ROLL DISPENSER CONTAINER AND BLANK THEREFOR

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FIG. 1

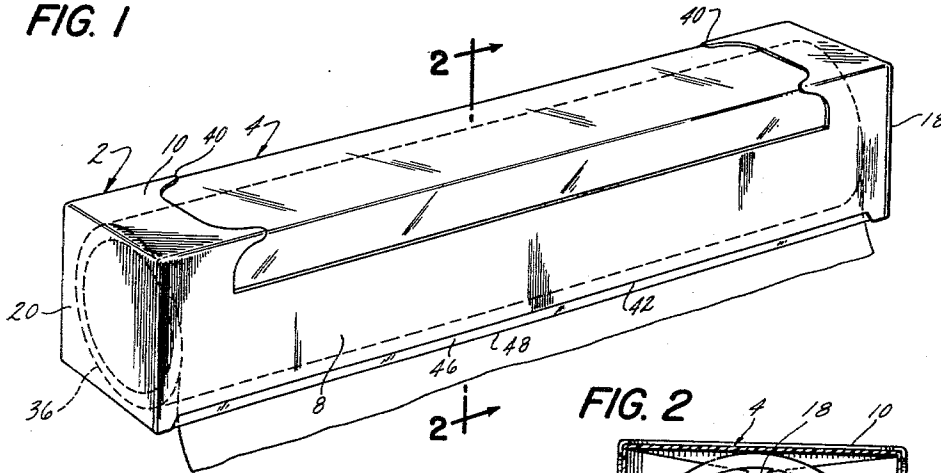


FIG. 4

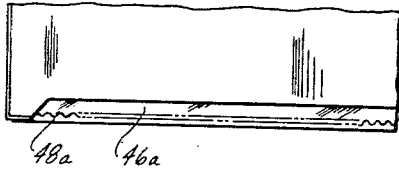


FIG. 2

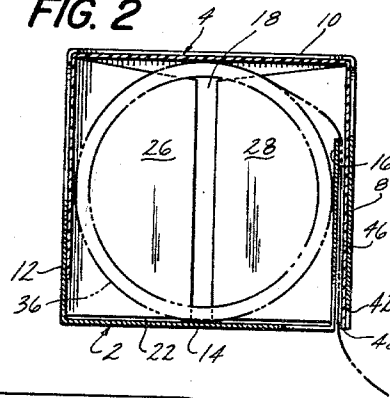
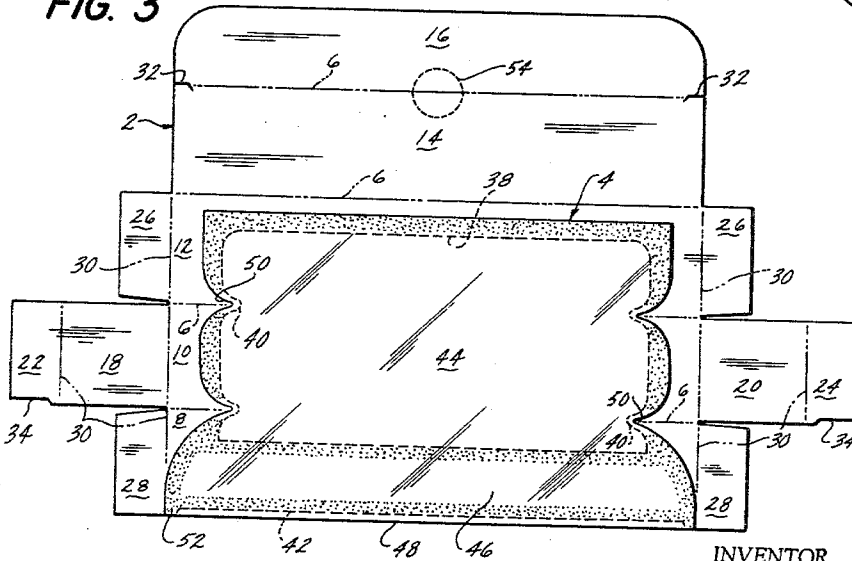


FIG. 3



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3,178,086

ROLL DISPENSER CONTAINER AND BLANK THEREFOR

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The present invention relates to roll dispenser containers, and, more particularly, to a novel roll dispenser container having a window therein and the blank therefor.

Heretofore, it has been prevalent practice to employ a separate cutting blade on dispenser cartons for rolling sheet material, although serrations on the edge of the carton have occasionally been employed. Occasionally, display of the roll material is desirable to attract the customers' attention as well as to facilitate location of a particular item. Generally, window cartons heretofore employed have relied upon relatively small apertures and thin transparent films, the window being located in one panel of the carton to avoid excessive reduction in strength. In the applicant's copending United States patent application Serial No. 191,018, filed April 30, 1962, and entitled Container and Method of Making Same, there is disclosed a container construction permitting design of large windows extending into a plurality of wall panels wherein the window and paperboard sheet material of the frame cooperate to form a highly effective, attractive and relatively high-strength assembly.

It is an object of the present invention to provide a novel and highly attractive roll dispenser container having a paperboard frame with a window therein which cooperates with the frame to provide a relatively strong and utilitarian assembly.

Another object is to provide such a container having an integrally formed paperboard frame and a window therein of synthetic plastic sheet material which provides a safe, effective cutting edge for severing lengths of a roll of sheet material being dispensed from within the container.

A further object is to provide such a container which may be economically and easily manufactured and which is readily adaptable to a plurality of designs and configurations to provide a pleasing display of the rolled sheet material.

Still another object is to provide a blank which may be economically fabricated and readily assembled into a novel roll dispensing container having a window of synthetic plastic sheet material which provides a safe, effective cutting edge for a roll of sheet material received therein.

Other objects and advantages will be apparent from the following detailed specification and the attached drawings wherein:

FIGURE 1 is a perspective view of a roll dispenser container embodying the present invention with sheet material of the roll received therein being dispensed therefrom;

FIGURE 2 is a sectional view to an enlarged scale along the line 2-2 of FIGURE 1 with the rolled sheet material therein being shown in phantom line;

FIGURE 3 is a plan view to a reduced scale of a blank for forming the container of FIGURE 1 with the fold lines shown in phantom line; and

FIGURE 4 is a fragmentary front elevational view of another embodiment of the roll dispenser container employing a different cutting blade edge configuration.

It has now been found that the foregoing and related objects may be readily attained by a novel roll dispenser container having a paperboard frame, a window of semi-

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rigid synthetic plastic sheet material and means for securing the window to the frame. The paperboard has a plurality of panels defining the several walls of the container and a horizontally oriented elongated dispensing aperture through which may be dispensed the sheet material rolled for storage within the carton. The frame has marginal portions overlapping corresponding marginal portions of the window and the window has an integral portion which extends to the dispensing aperture with the outer edge thereof projecting beyond a marginal portion of the frame adjacent the dispensing aperture to provide a cutting edge for severing lengths of a roll of associated sheet material passing through the dispensing aperture.

To enhance the rigidity of the projecting window portion providing the cutting edge, the frame has a portion extending across the window adjacent to but inwardly of the cutting edge which is adhesively secured to the window, thus resulting in a strong composite panel structure. Although the dispensing aperture may be provided by a slot in a wall panel spaced inwardly from an edge of the container, the dispensing aperture preferably is formed adjacent an edge of the container by spacing between adjacent panels, preferably between an inner panel or tuck flap and an outer wall panel, thus facilitating the guiding and withdrawal of lengths of the rolled sheet material.

To expose a large area of the roll of sheet material received in the container, the window preferably extends about at least one edge of the container so that it is located in two or more wall panels and has a linear fold therein. Although the paperboard frame may be provided by cap-type members on the ends of a window member formed into a tubular body portion, the frame preferably is integrally formed with a window aperture or cutout therein generally conforming to the periphery of the window over three sides thereof other than that providing the extending portion and of smaller dimension so that the marginal portions about the window aperture overlie the corresponding marginal portions of the window. In this manner, an unapertured portion of the frame inherently extends across the window inwardly of the cutting edge to provide the reinforcement for the cutting edge.

The projecting edge of the window thus formed provides a safe, attractive and highly effective cutting edge in a window container which is conveniently and economically fabricated. The cutting edge may be a straight or linear edge or it may have a plurality of teeth at least on the side margins thereof to facilitate the initiation of the tear.

The folds in the window may be formed and the window may be secured to the paperboard by various techniques, although the methods and structures preferably utilized are those disclosed in applicant's copending application Serial No. 191,018, filed April 30, 1962, and entitled Container and Method of Making Same. A general disclosure for a method and apparatus for cold-folding unscored synthetic plastic sheet material will be found in applicant's United States Patent No. 2,954,725, issued October 4, 1960, and entitled Method and Apparatus for Folding Plastic Sheet Stock.

Referring now in detail to the drawings, FIGURE 1 illustrates a roll dispenser container embodying the present invention and having a frame of paperboard sheet material generally designated by the number 2 and a window of semi-rigid synthetic plastic sheet material generally designated by the numeral 4. As best seen in the illustration of the blank in FIGURE 3, the paperboard frame 2 is integrally formed and is provided with longitudinal score or weakening lines 6 and cut so as to define front wall panel 8, top wall panel 10, rear wall panel 12, bottom wall panel 14 and an inner guide panel or tuck

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flap 16 which provide a generally rectangular body in the erected container. The end wall flaps 18, 20 with their locking tongue portions 22, 24 are hingedly connected to the top wall panel 10, and the dust flaps 26, 28 are hingedly connected to the front and rear wall panels 8 and 12 of the body at the score or weakening lines 30 and cooperate to provide the end walls for the erected container.

The frame 2 has a pair of incisions 32 extending inwardly from the side margins adjacent the weakening line defining the intersection between the bottom wall panel 14 and inner flap 16 with an angularly disposed portion extending into the bottom wall panel 14. The locking tongue portions 22, 24 have notched-out portions indicated by the numeral 34 facing the front wall panel 8 which receive the inner flap 16 therebetween and seat in the incisions 32 to lock releasably the inner flap 16 in closed position as shown in FIGURE 1. This lock construction also serves to augment the spacing between the inner flap 16 from the front wall panel 8 in the erected container which serves as a dispensing aperture for a roll 36 of sheet material received in the container.

In the illustrated embodiment, the paperboard frame 2 has a window aperture 38 therein of generally rectangular configuration which is spaced inwardly from the edges of the frame and extends through the top wall panel 10 and into the front and rear wall panels 8, 12 to provide a window aperture in three walls of the erected container. At each of the weakening lines 6 defining the intersections between the top wall panel 10 and the front and rear wall panels 8 and 12, the frame 2 has curvilinear projecting fingers 40 extending towards each other inwardly of the general periphery of the rectangular window aperture 38. The front wall panel 8 has an elongated notch designated by the numeral 42 in the bottom edge thereof inwardly of the side margins.

Referring now in detail to the window 4, the configuration thereof also is best seen in the blank illustrated in FIGURE 3. The window 4 is integrally formed and has a main portion 44 registering with the window aperture 38 and a cutting blade portion 46 extending from the main portion 44 to the bottom edge of the front wall panel 8 where the outer edge projects beyond the paperboard of the frame at the notched-out edge portion 42 thereof to provide a cutting blade edge 48. The main portion 44 is generally rectangular in configuration and dimensioned larger than the window aperture 38 so that the marginal portions of the frame 2 adjacent the window aperture 38 overlap the marginal portions thereof. At each of the weakening lines 6, the window 4 is provided with curvilinear notches 50 registering with the fingers 40 which overlap the margins thereof. The cutting blade portion 46 increases in width from the main portion 44 to substantially the entire width of the front wall panel 8 inwardly of the bottom edge thereof.

In this embodiment, the window 4 is secured to the paperboard frame 2 by an adhesive layer 52 having portions interposed therebetween along overlapping marginal portions about the window aperture 38 and a portion along the portion of the two elements between the window aperture 38 and adjacent the bottom edge of the front wall panel 8. The adhesive layer 52 terminates adjacent the fingers 40 so that the overlapping surfaces of the fingers 40 and the window 4 adjacent the margins of the notches 50 are free from adhesive to permit slippage therebetween with the fingers 40 bowing outwardly to accommodate the folds in the window, as pointed out in detail in the aforementioned United States patent application Serial No. 191,018. The adhesive layer portion bonding the cutting edge portion 46 to the front wall panel 8 adjacent the cutting blade edge 48 provides a composite structure which permits the use of the semi-rigid plastic sheet material in thinner gauges since the rigidity of the cutting blade edge 48 is significantly enhanced thereby.

In erecting the blank of FIGURE 3, the paperboard

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frame 2 and window 4 are folded along the weakening lines 6, 30 and the dust flaps 26, 28 are secured to the end wall flaps 18, 20 most conveniently by adhesive (not shown) or by other suitable means. The tongue portions 22, 24 extend along the surface of the bottom wall panel 14 and the bottom wall panel 14 and inner flap 16 are releasably locked by engagement of the notched-out portions 34 of the tongue portions 22, 24 in the incisions 32, the tongue portions 22, 24 further serving to exclude dust and other contaminants.

The spacing between the relatively short inner flap 16 and the front wall panel 8 provides a horizontally oriented, longitudinally extending dispensing aperture opening at the bottom edge of the container with the cutting blade edge 48 at the forward side thereof. As sheet material from the roll 36 is withdrawn over the inner edge of the inner flap 16 and is guided downwardly through the spacing or channel between the inner flap 16 and front wall panel 8 serving as the dispensing aperture, it may be drawn tightly about the cutting blade edge 48 and lengths thereof severed thereby. The elongated notch 42 in the bottom edge of the front wall panel 8 exposes the cutting blade edge 48 (or permits it to project beyond the material of the paperboard frame) over the width of the sheet material so as to enable the relatively rigid cutting blade edge 48 to function efficiently and to provide a clean tear.

To facilitate guiding of the sheet material through the spacing or channel between the inner flap 16 and front wall panel 8, there desirably may be provided a finger aperture 54 extending into both the inner flap 16 and bottom wall panel 14 at about the midpoint thereof dimensioned to permit insertion of a finger to thread the sheet material outwardly.

In the fragmentarily illustrated embodiment of FIGURE 4, the cutting blade portion 46a of the window has a serrated or toothed cutting blade edge 48a. Although many sheet materials such as wax paper, wrapping paper and various synthetic plastic films may be severed readily and safely by a linear or straight cutting blade edge with a minimum of feathering and burring, a cutting blade edge having serrations or teeth at the side margins thereof or across the entire cutting portion thereof may desirably be employed with more tear-resistant sheet materials such as aluminum foil and certain synthetic plastic sheet materials.

Although the preferred method of folding the window into the desired configuration is the cold-folding technique disclosed and claimed in applicant's United States Patent No. 2,954,725, thermoforming or cut-scoring of the plastic sheet material may also be employed to provide the window with its integral cutting blade portion. When simultaneous folding of the window and frame is employed, the illustrated structure permitting relative slippage between the notched-out window portions and the fingers of the frame is most desirably utilized as described in detail in applicant's copending application Serial No. 191,018; however, other folding techniques permitting the plastic sheet material to fold about a relatively sharp radius without injury to the paperboard or plastic may be utilized as by allowing the window to move relative to one of the panels adjacent the fold line.

The paperboard material for the frame should be relatively rigid to provide optimum strength and generally a thickness of 12 to 50 mils has proven satisfactory for more purposes, although heavier corrugated stock may be used in some applications. Since the paperboard may be dyed or printed readily, wide variations in appearance of the container are possible.

The synthetic plastic sheet material employed for the window should be semi-rigid with sufficient flexibility to accommodate stresses and impacts occurring during normal usage. The material preferably should have the characteristics of being foldable in accordance with the method of the aforementioned United States Patent No.

2,954,725 and of substantially retaining a fold made therein to permit cold folding in accordance therewith for rapid operation with unscored blanks to provide high-strength folds. From the standpoint of optimum aesthetic qualities and visibility, the plastic sheeting should be clear and relatively resistant to scratching during normal usage.

Exemplary of the various synthetic plastic sheetings which may be employed are biaxially oriented polystyrene, cellulose acetate, cellulose acetate butyrate, polyvinyl chloride-acetate copolymer, polyethylene and polypropylene. As a specific example of a highly advantageous material, biaxially oriented polystyrene of about 5 to 15 mils has been particularly effective because of its clarity, high strength and semi-rigidity coupled with sufficient resiliency and flexibility to provide durable folds and resistance to normal impacts.

Thus, the present invention provides a composite container of paperboard sheet material and synthetic plastic sheet material permitting a large window aperture to display and expose the contents of the container for sales appeal, for inventory purposes and for convenient estimation of the quantity of sheet material remaining within the carton. The cutting blade edge is an integral portion of the window to provide a relatively economical and readily assembled structure which is safe and easy to use since the cutting edge greatly minimizes risk of injury to persons and property during use and storage.

Since the relatively rigid plastic sheet material and paperboard sheet material are secured together, they provide a composite structure of relatively high strength despite the removal of a substantial area of the paperboard for the window aperture. The blank of the present invention may be readily and economically fabricated, and also may be speedily erected into a container by cold-folding techniques. Thus, there is provided a container which is highly attractive, relatively strong and utilitarian adaptable to a plurality of designs and configurations to display the rolled sheet material.

Having thus described the invention, I claim:

1. A roll dispenser container having a frame of semi-rigid sheet material defined by a plurality of wall panels, a window of semi-rigid synthetic plastic sheet material, and means securing said window to said frame, said frame having a horizontally oriented elongated dispensing aperture therein for passage therethrough of associated sheet material rolled for storage in said carton and having marginal portions about said window overlapping the corresponding marginal portions of said window, said window having an integral portion extending to said dispensing aperture with the outer edge thereof projecting beyond a marginal portion of the frame adjacent said dispensing aperture and being exposed in said dispensing aperture to provide a cutting edge for severing lengths of a roll of associated sheet material passing through said dispensing aperture.

2. The container of claim 1 wherein said frame has a portion extending across the window adjacent but inwardly of the cutting edge and wherein said securing means is adhesive, a portion of said adhesive being interposed between and bonding said window and the portion of said frame extending across said window to enhance the rigidity of the cutting edge.

3. A roll dispenser container having a paperboard frame defined by a plurality of wall panels, a window of semi-rigid synthetic plastic sheet material having at least one linear fold therein, and adhesive securing said window to said frame, said paperboard frame having a window aperture in at least two of said wall panels and a horizontally oriented elongated dispensing aperture spaced from said window aperture for passage therethrough of associated sheet material rolled for storage in

said carton, said frame having marginal portions about said window aperture overlapping the corresponding marginal portions of said window, said window having an integral portion extending beyond said window aperture of said frame to said dispensing aperture with the outer edge thereof projecting beyond a marginal portion of the frame adjacent said dispensing aperture and being exposed in said dispensing aperture to provide a cutting edge for severing lengths of a roll of associated sheet material passing through said dispensing aperture, said integral extending portion of said window being bonded to said frame adjacent said dispensing aperture to enhance the rigidity of the cutting edge.

4. A six-sided roll dispensing container having an integrally formed paperboard frame; a window of semi-rigid synthetic plastic material having a substantially rectilinear fold therein; and adhesive securing said window to said frame, said paperboard frame having panels defining end walls and longitudinally extending front, rear, top and bottom walls of said container and an inner flap hingedly connected to said bottom wall panel and extending generally parallel to and spaced inwardly of the front wall panel to provide a horizontally oriented, longitudinally extending dispenser aperture adjacent the intersection of said front and bottom wall panels for passage therethrough of associated sheet material rolled for storage in said carton, said frame having a longitudinally extending window aperture in the front wall panel thereof spaced inwardly from said bottom and end walls and extending into said top wall panel around the intersection of said top and front wall panels, said aperture being of lesser dimension than said window and the marginal portions of said frame adjacent said aperture overlapping the corresponding margins of said window, with said rectilinear fold being generally aligned with said intersection, said window having an integral portion extending behind said front wall panel to the bottom edge thereof and spaced from said flap, said extending window portion having a longitudinally extending edge thereof projecting beyond a portion of said bottom edge of the frame adjacent said dispensing aperture to provide a cutting edge for severing lengths of a roll of associated sheet material passing therethrough.

5. The container of claim 4 wherein said window aperture extends across said top wall panel and around the corner formed by the intersection of said top and rear walls and into said rear wall, and wherein said window has a second substantially rectilinear fold generally aligned with said intersection of said top and rear walls.

6. The container of claim 4 wherein a portion of said adhesive is interposed and bonds said front wall panel and said window between said window aperture and said bottom edge to increase the rigidity of the projecting cutting edge.

7. The container of claim 4 wherein said window is fabricated from biaxially oriented polystyrene of about 5 to 15 mils in thickness.

8. The container of claim 4 wherein said front wall panel has a notched-out portion in its bottom edge and said window has its edge substantially aligned with the unnotched edge portion to provide the projecting cutting edge at said notched-out portion.

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