United States Patent [19]

Mechnick

[11] **3,823,865**

[45] **July 16, 1974**

[54] **PACKAGE FOR CIGARETTE AND THE LIKE**

[76] Inventor: **William R. Mechnick,** de la Cote 10-1110, Morges, Switzerland

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[52] **U.S. Cl.** ..... **229/44 CB,** 206/264, 206/268, 206/273, 229/17 R

[51] **Int. Cl.** **B65d 5/66**

[58] **Field of Search** ..... 229/44 CB, 44 R, 17 R; 206/41 D, 41 H

[56] **References Cited**

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2,886,233	5/1959	Kessler	229/44 CB
3,018,031	1/1962	Ahlbor	229/44 CB

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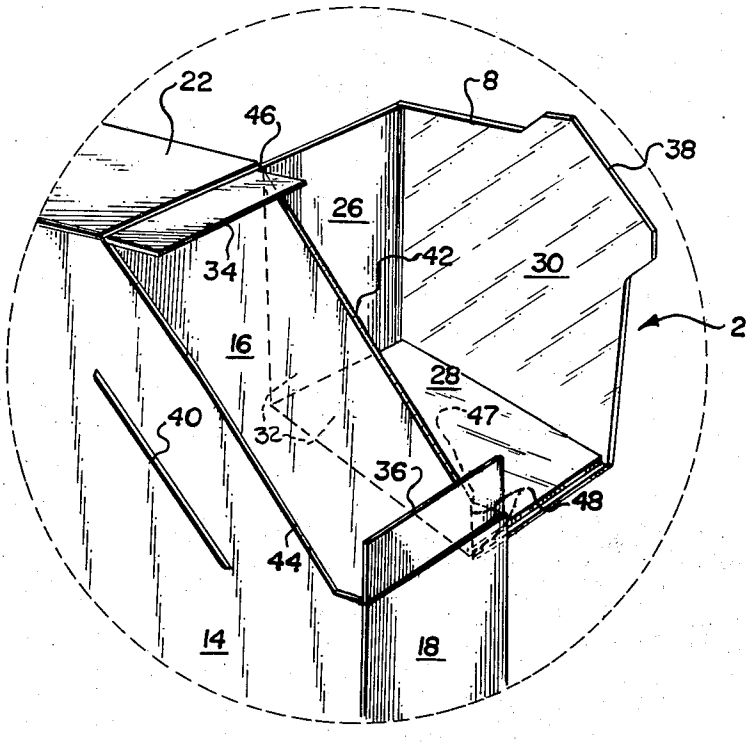
678,761	12/1964	Italy	229/17 R
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Primary Examiner—William I. Price
Assistant Examiner—Douglas B. Farrow

[57] **ABSTRACT**

A package for cigarettes is provided, the package being formed from a single blank sheet of material and includes top and bottom panels, two side panels, a front facing panel and a back facing panel and a lid as an integral part thereof. The lid which includes, front, top, side and back portions is fashioned to fit over and cover an open top corner of the package and is hingedly connected to the back facing panel along an oblique fold line on said back facing panel extending from the top panel towards one of the side panels of the package. A blank from which the package is formed is also provided.

3 Claims, 4 Drawing Figures



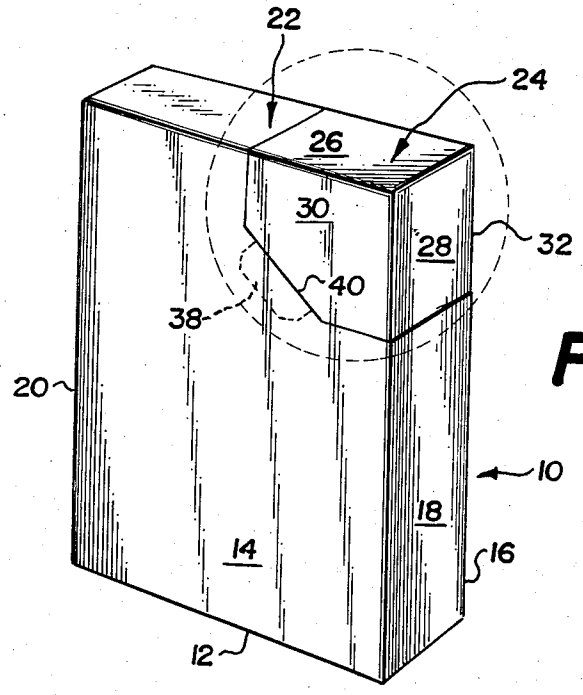

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FIG.1

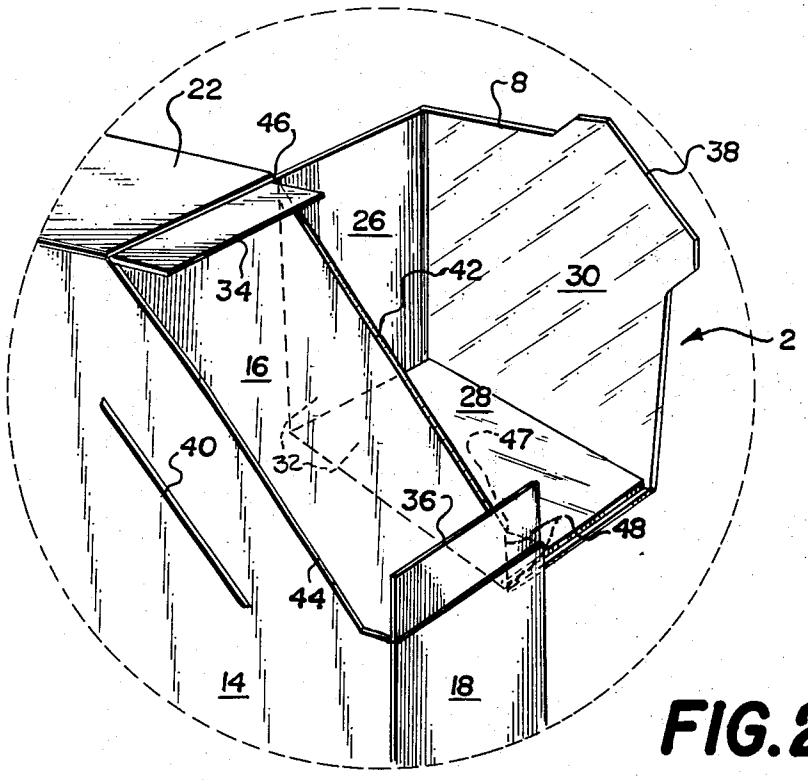

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FIG.2

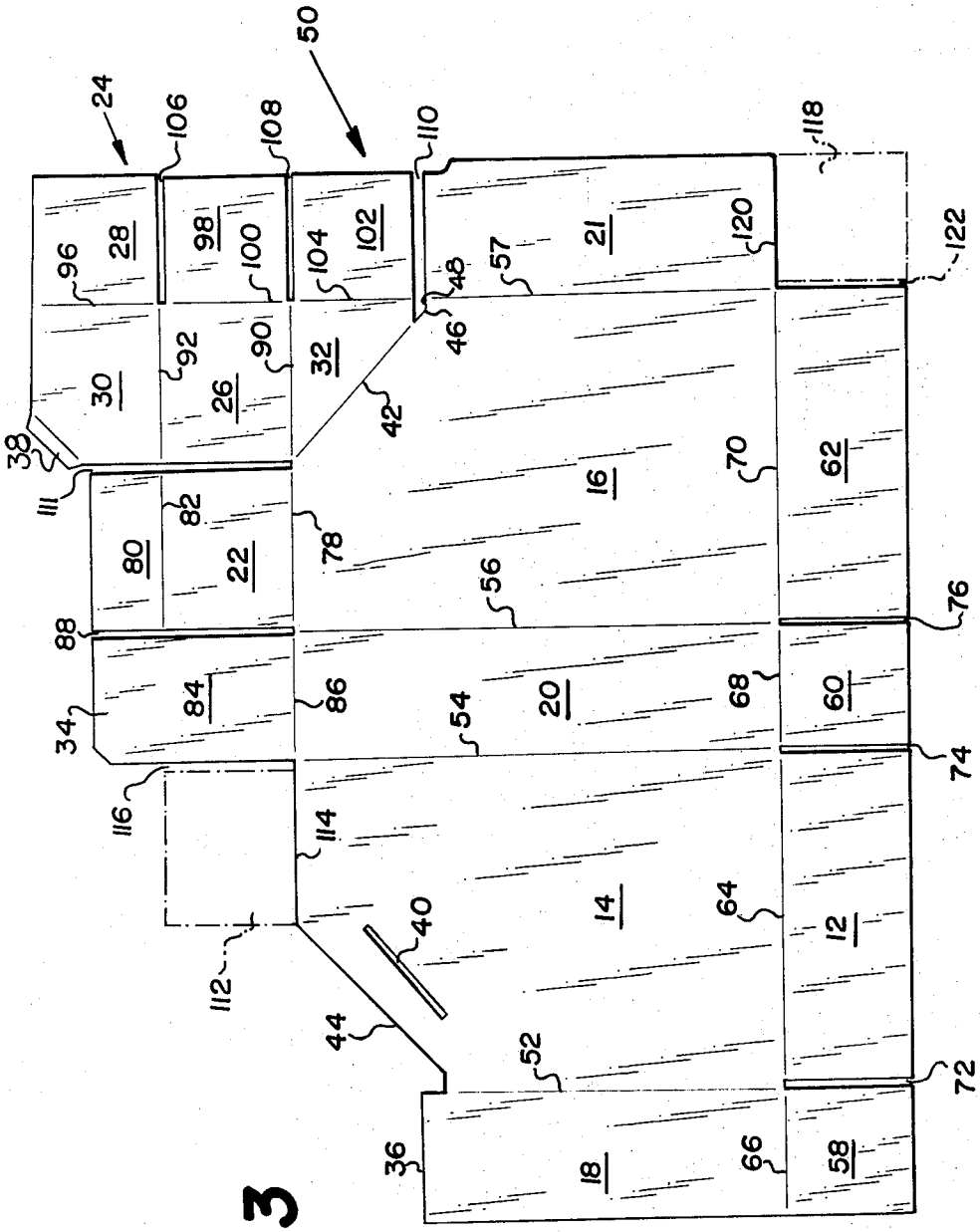

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86
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FIG. 3

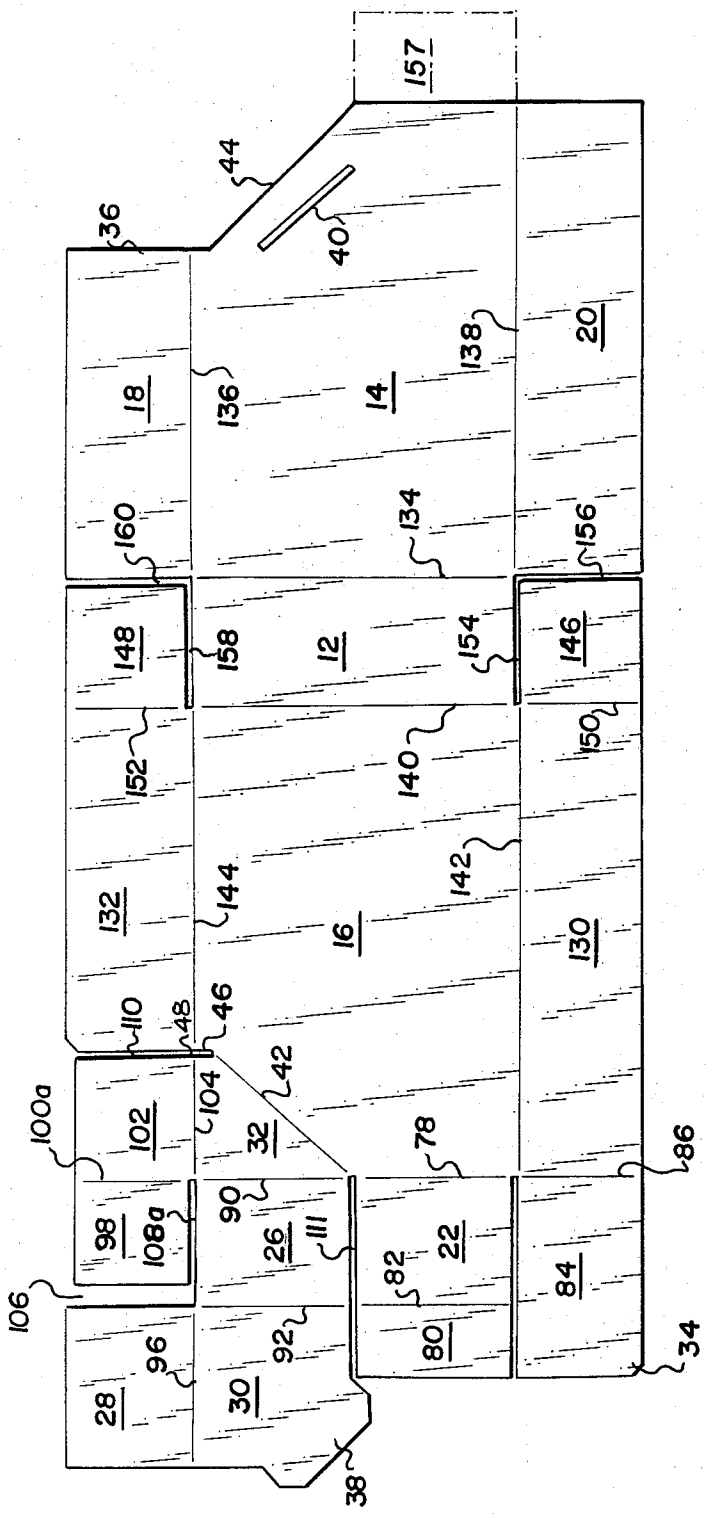

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130
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48
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100a
102
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86
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108a
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84
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FIG. 4

PACKAGE FOR CIGARETTE AND THE LIKE

FIELD OF THE INVENTION

The present invention relates to a package for cigarettes, little cigars and the like and includes a lid integral therewith hingedly connected to and which pivots along a back facing panel of the package and fits over and covers an open top corner of the package, and to a blank for use in forming such package.

BACKGROUND OF THE INVENTION

Packages or boxes for cigarettes or little cigars are usually made of cardboard or plastic materials and are of rigid or semi-rigid construction. Practically all of such packages have either a flanged pull down cover, or detachable cover, which permits freeing one end of the cigarettes or cigars enclosed in the pack. Cigarettes or cigars packed in such packages are detached en masse, and thus, it is difficult to grasp them individually. Accordingly, cigarettes or cigar box manufacturers often employ strips or ribbons which pass under the enclosed end of two or three of the cigars or cigarettes, with the strip itself emerging from the box, in order to permit the extraction of two or three cigarettes or cigars when the box is full. The ribbons or strips then serve no further function and they must be thrown away, since they are bothersome. Thus, their effectiveness is very limited, in view of all the complications which their inclusion involves in the course of manufacturing the box. In addition, the detachable covers are easy to lose. The pull down covers as will be discussed hereinafter, for the most part pivot along their entire width and thus close rather poorly, since the surfaces in contact with each other and rubbing against each other are rather large; this is particularly so when the pack is full and the cover rubs against all the ends of the cigarettes or the cigars which are freed en masse. Finally, in both cases, the box is difficult to open and close with one hand.

U.S. Pat. No. 3,018,031 to Ahlbor et al. discloses a box for cigarettes wherein a corner thereof is pivoted from a portion of the top of the box. The box is prepared from a blank which includes an extensive number of die cuts and tolerances and thus requires complicated and probably new machinery for its manufacture. Unfortunately the box does not include adequate support for the lid to prevent twisting and breaking off of the lid.

U.S. Pat. Nos. 2,202,279 and 2,202,280 disclose closure means for packages which are hinged from the top portion or side portion of the package.

U.S. Pat. No. 2,874,524 to Ringler discloses the conventional "flip-top" package.

The conventional "flip-top" package includes an insert which supports and braces the package to provide lateral support therefor. Furthermore, the blank of sheet material employed in forming the "flip-top" package requires excessive amounts of cardboard and includes many die-cut parts requiring close tolerances and thus complicated machinery for forming the package. The many die-cut parts required creates another problem in that production of such packages must be carried out at a comparatively slow rate, for example 125 packages per minute. Even with such slow production, the requirement of many die-cut parts and close tolerances result in repeated jamming of production

equipment and an untenable amount of shut-down time.

SUMMARY OF THE INVENTION

In accordance with the invention, there is provided a package and a blank employed in forming such package which overcomes the disadvantages associated with prior art packages and blanks. The package of the invention is preferably prepared from a wrap-around blank as opposed to conventional end-to-end blanks as employed in the prior art, which includes less die-cut parts and less close tolerances than required in such prior art blanks. Furthermore, the package of the invention requires no insert for internally supporting the package.

The package in accordance with the invention is formed from a single blank of sheet material, such as cardboard, and includes a lid as an integral part thereof, said package comprising a substantially rectangular box, a top corner of which is open, and a lid for the box which fits over and is designed to close off the open top corner of the box. The lid is hingedly connected to the back facing panel of the box on an oblique angle extending down the back facing panel from the top of the package towards a side thereof.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 is a perspective view of the package of the invention wherein the lid comprising a top corner of the package is in a closed position.

FIG. 2 is a perspective fragmentary view of the package of FIG. 1 wherein the lid is in an open position.

FIG. 3 is a plan view of the preferred wrap-around blank for use in forming the package illustrated in FIG. 1.

FIG. 4 is a plan view of another blank employed in forming the package illustrated in FIG. 1.

DETAILED DESCRIPTION OF THE INVENTION

FIGS. 1 and 2 illustrate a package **10** formed according to the present invention in the shape of a rectangular parallelpiped and comprising a generally rectangular bottom panel **12**, front and back face panels **14** and **16** respectively, vertical side panels **18** and **20** and a top panel generally referred to by the numeral **22**. A lid or closure member which is adapted to fit over a top corner of the package **10**, is generally referred to by the numeral **24**, and appears to be fashioned from a portion of side panel **18**, a portion of front face panel **14**, a portion of top panel **22** and a portion of back face panel **16**.

FIG. 1 shows the lid in its closed position and FIG. 2 shows the lid in its open position.

More specifically, the lid **24** comprises a top portion **26**, a side portion **28** and a front portion **30**. It also includes back portion **32** shown by the broken lines in FIG. 2 and hidden by back face **16**. The top **22** of the package **10** may include support strip **34** which is an extension of flap **84** and the side **18** may include support strip **36** which is an extension of side **18** as shown in FIG. 2, for supporting the top portion **26** and the side portion **28**, respectively, of lid **24** when the lid is in a closed position.

Front portion **30** of the lid includes tab or tongue **38**; the front face panel **14** includes slot or opening **40**, for engaging tab **38** of said front portion **30**, when the lid is in the closed position.

The lid 24 is hingedly connected to the back panel via oblique hinge 42. The hinge 42 is substantially in a plane parallel to or in the same plane as oblique edge 44 of front facing panel 14.

In a preferred embodiment, the hinge 42 is defined by a portion of the back panel 16 which begins at the edge 46 of top panel 22 and angles down towards the side panel 18 at an angle ranging from about 125° to about 145° to the horizontal stopping short of side panel 18, at a point designated by numeral 47 from which it continues as a cut at a right angle to side panel 18, as shown by the numeral 48.

The oblique edge 44 of front face panel 14 which preferably is in the same plane as the hinge 42 may include a small portion at right angles to the side panel 18 so as to substantially correspond to hinge 42 and cut 48 to ensure that the lid fits easily over and completely covers the open top corner, when the lid is in a closed position.

The package 10 of the present invention is made from a sheet cardboard blank 50 as shown in FIG. 3. The blank is divided by incisions or slits and fold lines into flaps and wall sections for forming the package and its lid. As shown in FIG. 3, the blank comprises front face panel 14 (which includes slot 40) and back face panel 16, which are in side by side relationship to each other, side panel 18 and side panel 20 and flap 21. The side panel 18, front face panel 14, side panel 20, back face panel 16 and flap 21 are connected together along fold lines 52, 54, 56, 57, respectively, and are formed integrally with one another. Further, bottom panel 12 with associated bottom flaps 58, 60, 62 are connected to front face panel 14, side panel 18, side panel 20 and back face panel 16, respectively, via folds 64, 66, 68, 70, respectively as shown. Bottom panel 12 is separated from flaps 58, 60, by means of slits 72, 74, respectively and flap 62 is separated from flap 60 by slit 76.

The blank also includes top panel 22 connected to back face panel 16 via fold 78; flap 80, is connected to top panel 22 by fold 82, and flap 84 which includes support strip 34 is connected to side panel 20 via fold 86. The top panel 22 and flap 80 are separated from flap 84 by slit 88.

The lid 24 generally comprises back portion 32 connected and hinged to back face panel 16 via fold or hinge 42, top portion 26 connected to back portion 32 via fold 90, front portion 30 connected to top portion 26 via fold 92, side portion 28 connected to front portion 30 via fold 96, flap 98 connected to top portion 26 via fold 100 and flap 102 connected to back portion 32 via fold 104, all of which are integrally formed with one another, and integrally formed with the blank via hinge or fold 42-cut 48. Slit 106 separates side portion 28 and flap 98 and slit 108 separates flaps 98 and 102, as shown. Furthermore, flap 102 and a portion of back portion 32 are separated from flap 21 and part of back face panel 16 via slit 110. Slit 111 separates flap 80, top panel 22 and top and front portions 26, 30 of lid 24.

If desired the flap 80 attached to top panel 22 can be removed and top panel or flap 112 indicated by broken lines, can be secured to front face panel 14 via fold 114 and separated from flap 84 via slit 116. In a similar manner flap 118 shown in broken lines and connected to flap 21 via fold 120 and separated from flap 62 via slit 122, can optionally be employed in place of flap 58.

A package in accordance with the invention can be made from the blank of FIG. 3 as follows. Front face panel 14 and back face panel 16 are folded about fold lines 54 and 56 into superposition with one another. Side panel 18 and flap 21 are then folded toward each other along folds 52 and 57 respectively, into overlapping and superimposed position with the side panel 18 covering flap 21. It will be appreciated that flap 21 may assume the outside position so as to cover panel 18 in which case flap 21 would be the exterior side panel. Side panel 18 and flap 21 are glued to each other to form a four-sided figure open at top and bottom. Flaps 58 and 60 are folded toward each other about folds 66 and 68, respectively; flap 62 is folded about fold 70 over flaps 58 and 60; bottom panel 12 is then folded about fold 64 over flap 62 and glued thereto to complete the bottom of the package.

The flap 84 is folded about fold 86 over the open top of the package in line with top edges of the front face, side 20 and back face panels. The top panel 22 is folded about fold 78 and positioned over the flap 84. The flap 80 is folded about fold 82 at about right angles to the top panel 22 and maneuvered into the space between an edge of the flap 84 and the front face panel 16. Flap 80 is bonded, for example with glue to an inside surface of front face panel 16. Supporting strip 34 of flap 84 extends beyond the top panel 22 as shown in FIG. 2.

The lid 24 is formed as follows. Flap 102 is folded about fold 104 at about right angles to back portion 32. Top portion 26 is then folded about fold 90 towards the opening in the top of the package and at right angles to the back portion 32. Flap 98 is then folded about fold 100 so as to be superimposed over flap 102. Front portion 30 is folded about fold 92 against the edges of superimposed flaps 102 and 98 to seal off the lid. Finally, side portion 28 is folded about fold 96 so as to be superimposed over flaps 102 and 98. The side portion 28 is glued to superimposed flaps 102 and 98 to complete the package.

The completed lid pivots about hinge 42 as it is opened and closed.

FIG. 4 illustrates a variation of the blank of FIG. 3, wherein front face panel 14 and back face panel 16 are in end to end relationship to each other as opposed to side by side relationship as shown in FIG. 3. In FIG. 4, front face panel 14 which includes oblique slot 40, is connected to bottom panel 12, side panels 18 and 20 via folds 134, 136 and 138, respectively. Back face panel 16 is connected to bottom panel 12 and flaps 130 and 132 via folds 140, 142 and 144 respectively. Flaps 130 and 132 are connected to flaps 146 and 148 respectively via folds 150 and 152, respectively. Flap 146 is separated from bottom panel 12 and side panel 20 via slits 154 and 156, respectively, flap 148 is separated from bottom panel 12 and side panel 18 via slits 158 and 160, respectively.

The lid assembly shown in FIG. 4 is essentially the same as that shown in FIGS. 2 and 3 with the exception that flap 98 is hinged from flap 102 via fold 100*a* and flap 98 is separated from top portion 26 by slit 108*a*.

As seen in FIG. 4, flap 157 indicated by broken lines may be included and flap 80 eliminated, so that flap 157, 84 and top panel 22 are employed to form the completed top panel 22.

A package 10 is formed from the blank of FIG. 4 by folding front face panel 14 and back face panel 16

about folds **134** and **140** respectively, into superposition with one another. Flaps **130** and **132** are folded about folds **142** and **144,** respectively, toward the front face panel **14.** Flaps **146** and **148** are folded about folds **154** and **158,** respectively, into position over the inside surface of bottom panel **12.** Side panels **18** and **20** are folded about folds **136** and **138** into superposition over flaps **132** and **130,** respectively, and glued thereto to form a three-sided open-top package.

The lid **24** is formed as described with respect to FIG. **3** except that flap **102** is folded about fold **104** and flap **98** is folded about fold **100***a* towards the top panel **22** and at right angles to flap **102.**

Although the above-described package is generally indicated as being designed for cigarettes, it is obvious that it could also be used for cigars or other similarly shaped objects and may be in a relatively large form for use in packaging cereal, detergent, etc. It is also possible to form the package according to this invention in the form of a box with two pivoting corners, e.g., by using two top corners on opposite sides of the box.

Although the package and blank of the invention are described above so as to include an oblique slot **40** in the front facing panel and a tab **38** on the front portion of the lid for engaging said slot, both the slot and tab are optional features and may be eliminated. Furthermore, the slot **40** may be eliminated and the front portion of the lid may include a tab **38,** for facilitating opening and closing of the lid.

With respect to the blank illustrated in FIG. **3,** it will be understood that the side panel **18** and flap **21** may be reversed in function, so that flap **21** becomes the side panel and vice versa. The bottom panel **12** and flap **62** may also be reversed so that flap **62** becomes the bottom panel. With respect to the blank illustrated in FIG. **4,** the side panels **18** and **20** and flaps **132** and **130** may be reversed in function so that said flaps become the side panels. Furthermore, in FIGS. **3** and **4** the flap **98** may be connected either to top portion **26** or flap **102** of the lid.

The package described here can be made from any suitable rigid or semi-rigid material. More particularly, it may constitute a throw-away package, which is discarded when empty, or it may be in the form of a case, having a bottom or side portion which is removable or may be opened, into which a pack of cigarettes or cigars is placed.

The package shown can be opened and closed with one hand without any difficulty. In fact, to do this, it is enough to hold it in the hollow of the hand, while the thumb pivots lid **24** in one direction or another. During closing, it is enough to exert a slight pressure with the thumb on the front face **30** of lid **24** in order to slide tab **38** against front face panel **14** of the box and in order to open slightly the lips of slot **40,** thus facilitating introduction of tab **38** into the said slot. It should be noted that when the tab or tongue-like strip **38** is placed in slot **40,** lid **24** is effectively held and the edges of top, side and front portions of the lid cover support strips **34** and **36,** respectively, and the edge of front portion **30,** thus facilitating closing of the box.

The cigarettes contained in the box are not all uncovered during the opening of lid **24,** and only one end of several of them is accessible, due to the opening in the corner of the box, so that it is always possible to grasp one cigarette at a time, i.e. the cigarette which is in this corner of the box at the time. Thus, it is unnecessary to use any ribbons or other means of separating and extracting the cigarettes.

The package of the invention can be formed employing standard cigarette packaging machine equipment. Where the blank of FIG. **3** is employed, the packages can be formed at a rate of 160–200 per minute.

It will be apparent that the cigarettes prior to being inserted in the package of the invention will first be packed in an aluminum or silver foil pouch in accordance with conventional cigarette package manufacturing techniques. The foil pouch may be scored along an oblique path near the top corner thereof corresponding to the open top corner of the package and lid therefor. In this manner, the lid of the cigarette package may be opened and the upper corner of the foil pouch appearing under the lid can be cut or torn along the score lines for easy access to the cigarettes.

After the cigarettes are packed in the package and sealed therein, the packages may then be removed from the standard cigarette packing machine in the conventional manner to a further wrapping station wherein the revenue stamps and the cellophane are applied to the packages.

From the foregoing, it will be apparent that the present invention provides a novel cigarette package which may be formed on the standard cigarette packing machines presently in use and which is formed of paper board or the like having a reclosable top or cover. In addition, it is apparent that the present invention provides a novel cigarette package formed from a single blank of sheet material wherein there is a minimum amount of waste when cutting the package blanks and which provide a sturdy cigarette package resistant to deformation.

Although this invention has been described with respect to its preferred embodiments, it should be understood that many variations and modifications will now be obvious to those skilled in the art, and it is preferred, therefore, that the scope of the invention be limited, not by the specific disclosure herein, only by the appended claims.

What is claimed is:

1. A single blank of sheet material employed for forming a package, said blank comprising a substantially rectangular shape and scored to include folds defining front facing and back facing panels, a bottom panel, two side panels and a top panel, a first of said side panels being disposed between said front facing and back facing panels and connected to each of said panels via fold lines, said front facing panel having five sides including an oblique edge at the top free corner thereof, said back facing panel having a substantially oblique fold at a top corner thereof, disposed away from said first side panel,

said oblique fold running from a top edge of said back facing panel down towards a side edge thereof, and defining a substantially triangular section of said back facing panel having a top horizontal edge and a side vertical edge, said substantially triangular section defining the back portion of said lid,

a second of said side panels extending from and connecting to a free longitudinal edge of either of said front facing or back facing panels via fold lines, said second side panel extending up to the bottom portion of said oblique edge or fold of said front or back facing panels,

a glue flap for retaining said front and back facing panels and said side panels when folded along said fold lines so that said front and back facing panels are in superposition with respect to each other and said side panels are in superposition with respect to each other and the oblique edge of said front facing panel being in substantially the same plane as the oblique fold in the back facing panel, in generally tubular rectangular form,

said bottom panel extending from and connected, via fold lines, to a free edge of either of said front facing and back facing panels, bottom flaps connected, via fold lines, to free edges of said side panels and said front facing or back facing panels, for closing off the bottom of said box,

said top panel extending from and connected, via fold lines, to an upper horizontally disposed edge of said front facing panel or back facing panel, a top flap extending from and connected, via fold lines, to said first side panel, said top panel and said flap when folded down about said fold lines between said front facing and back facing panels and adhered to each other close off a portion of the top of said box, leaving only an open top corner of said box, a top portion of said lid extending from and connected, via a fold line, to the top horizontally disposed edge of the substantially triangular section of the back facing panel, a front portion of said lid extending from and connected to said top portion of said lid at a position opposite to said back portion, by means of a fold line which is disposed between said front portion and said top portion,

a side portion of said lid and flaps extending from and connected, via fold lines, to free side edges of said front portion of said lid and said back portion defined by said substantially triangularly shaped section of said lid, so that when said top portion and said front portions of said lid are folded downwardly toward the open top corner, and said side portion and said flaps are folded inwardly toward said open top corner, and secured to each other, said lid is formed, which pivots along the back facing panel and fits over and closes off said open top corner of said box.

2. A blank for forming a package said blank comprising a substantially rectangular shape and scored to include folds defining front facing and back facing panels, two side panels, and a top panel, a first of said side panels being disposed between said front facing and back facing panels and connected to each of said panels via fold lines, said front facing panel having five sides including an oblique edge at the top free corner thereof,

said back facing panel having a substantially oblique fold at a top corner thereof, disposed away from said first side panel,

said oblique fold running from a top edge of said back facing panel down towards a side edge thereof, and defining a substantially triangular section of said back facing panel having a top horizontal edge and a side vertical edge, and substantially triangular section defining the back portion of said lid,

a second of said side panels extending from and connecting to a free longitudinal edge of either of said front facing or back facing panels via fold lines, said second side panel extending up to the bottom portion of said oblique edge or fold of said front or back facing panels,

a glue flap for retaining said front and back facing panels and said side panels when folded along said fold lines so that said front and back facing panels are in superposition with respect to each other and said side panels are in superposition with respect to each other and the oblique edge of said front facing panel being in substantially the same plane as the oblique fold in the back facing panel, in generally tubular rectangular form, said bottom panel extending from and connected via fold lines to a free edge of either of said front facing and back facing panels, bottom flaps connected, via fold lines, to free edges of said side panels and said front facing or back facing panels, for closing off the bottom of said box,

said top panel extending from and connected, via fold lines, to an upper horizontally disposed edge of said front facing panel or said back facing panel, a top flap extending from and connected, via fold lines, to said first side panel, said top panel and said flap when folded down about said fold lines between said front facing and back facing panels and adhered to each other, close off a portion of the top of said box, leaving only an open top corner of said box, a top portion of said lid extending from and connected, via a fold line, to the top horizontally disposed edge of the substantially triangular section of the back facing panel, a front portion of said lid extending from and connected to said top portion of said lid, at a position opposite to said back portion, by means of a fold line which is disposed between said front portion and said top portion,

and a side portion of said lid and flaps extending from and connected, via fold lines, to free side edges of said front portion of said lid and said back portion defined by said substantially triangularly shaped section of said lid, so that when said top portion and said front portions of said lid are folded downwardly toward the open top corner, and said side portion and said flaps are folded inwardly toward said open top corner, and secured to each other, said lid is formed, which pivots along the back facing panel and fits over and closes off said open top cover of said box.

3. A blank for a package formed from a single blank of sheet material and including a lid as an integral part thereof, said blank comprising a substantially rectangular shape and scored to include folds defining front facing and back facing panels, two side panels, a bottom panel and a top panel, said bottom panel being disposed between bottom edges of said front facing and back facing panels and connected to each of said panels via fold lines,

said front facing panel having five sides including an oblique edge at the top free corner thereof, disposed away from said bottom panel,

said back facing panel having a substantially oblique fold at a top corner thereof disposed away from said bottom panel and defining a substantially triangular section of said back facing panel, said triangular section defining the back portion of said lid, said side panels and corresponding flaps extending from and connected, via fold lines, to free horizontal edges of said front facing and back facing panels, such that when said front facing and

back facing panels are folded along the fold lines separating the bottom panel, toward each other, and said side panels and corresponding flaps are folded inwardly toward each other and said flaps and side panels glued, a box is formed of generally rectangular shape closed off at all sides except the top and the oblique edge of said front facing panel and the oblique fold of said back facing panel are in line with each other in the same plane,

said top panel extending from and connected, via fold lines, to a free edge of said back facing panel or said front facing panel,

said free edge running parallel to said bottom panel, a top flap in line adjacent to said top panel, extending from and connected, via a fold line, to a side panel or corresponding flap, said top panel and said top flap when folded along said fold lines in line perpendicular to said back facing panel, and adhered to each other, close off a portion of the top of said box, leaving only an open top corner of said box, a top portion of said lid extending from and connected, via a fold line, to a vertically disposed edge of said substantially triangular section of the back facing panel, a front portion of said lid extending from and connected to said top portion of said lid, at a position opposite to said back portion, by means of a fold line which is disposed between said front portion and said top portion, and a side portion of said lid and flap extending from and connected, via fold lines, to free horizontally disposed edges of said front portion and said back of said lid, so that when said top portion and side portion, said flap and said front portions of said lid are folded inwardly and downwardly toward the open top corner and secured to each other, said lid is formed, which pivots along the back facing panel and fits over and closes off said open top corner of said box.

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