Aug. 18, 1964 E. T. BESCHMANN 3,144,970

DISPENSER FOR ROLL OF SHEET MATERIAL

Filed Aug. 1, 1963 4 Sheets-Sheet 1

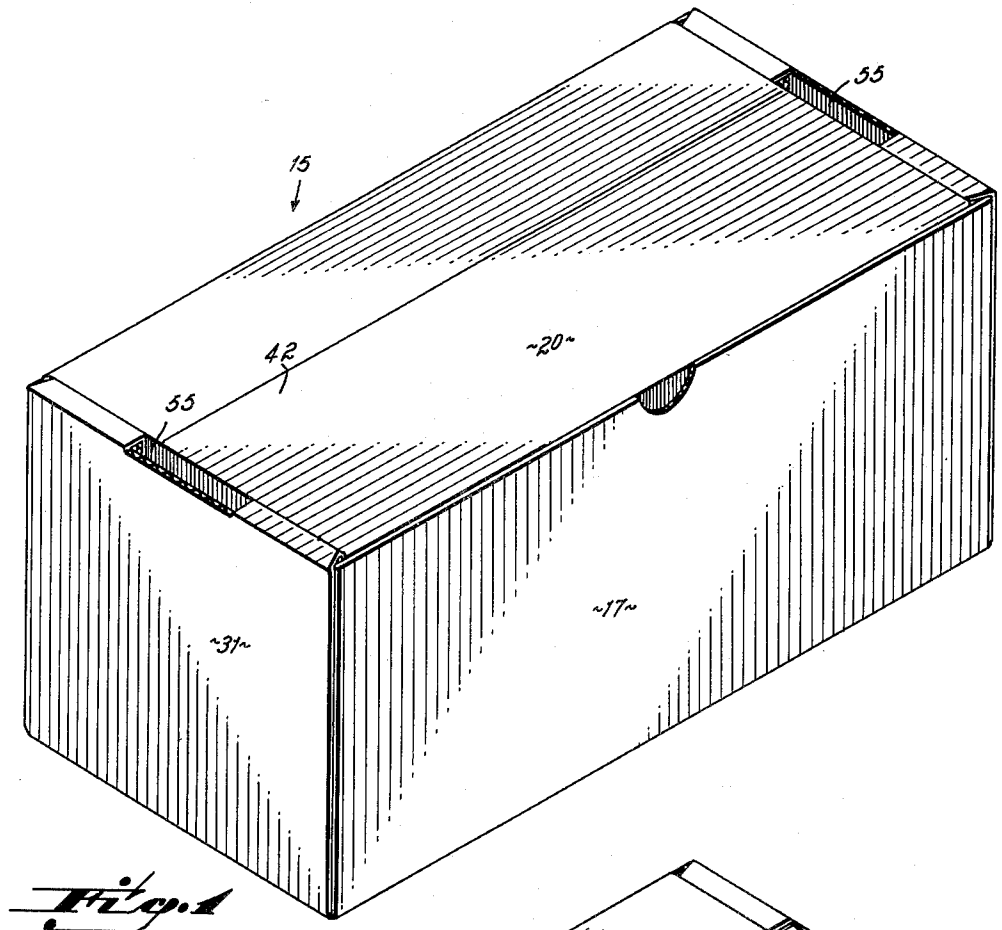

Fig. 1

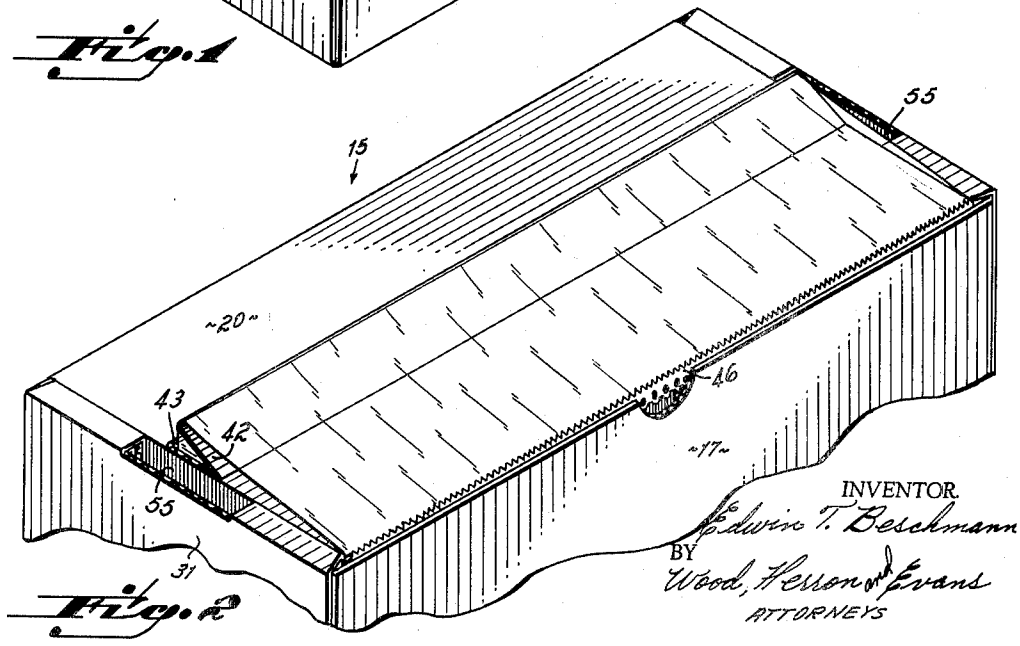

Fig. 2

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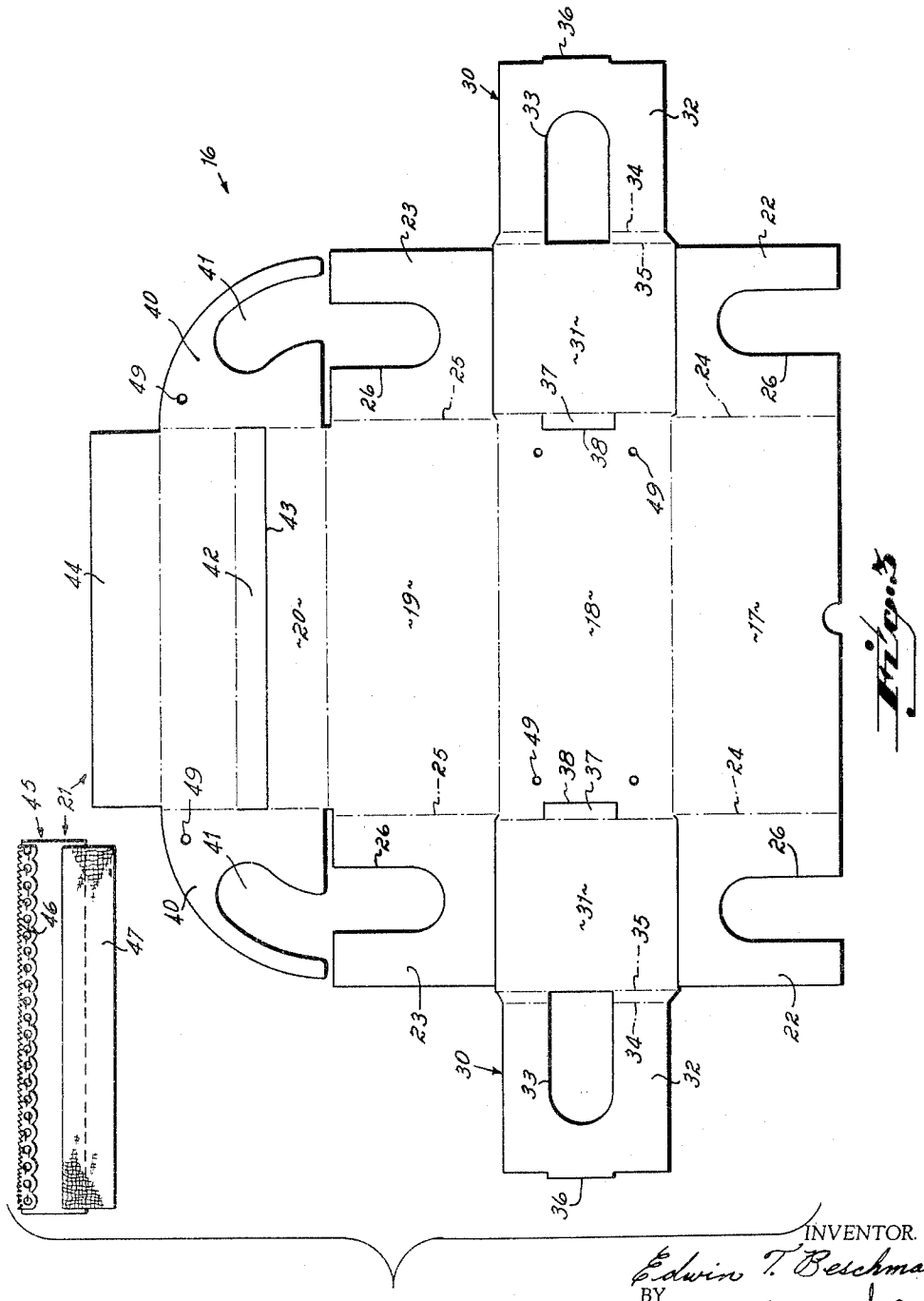

Fig. 3

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DISPENSER FOR ROLL OF SHEET MATERIAL

Filed Aug. 1, 1963 4 Sheets-Sheet 3

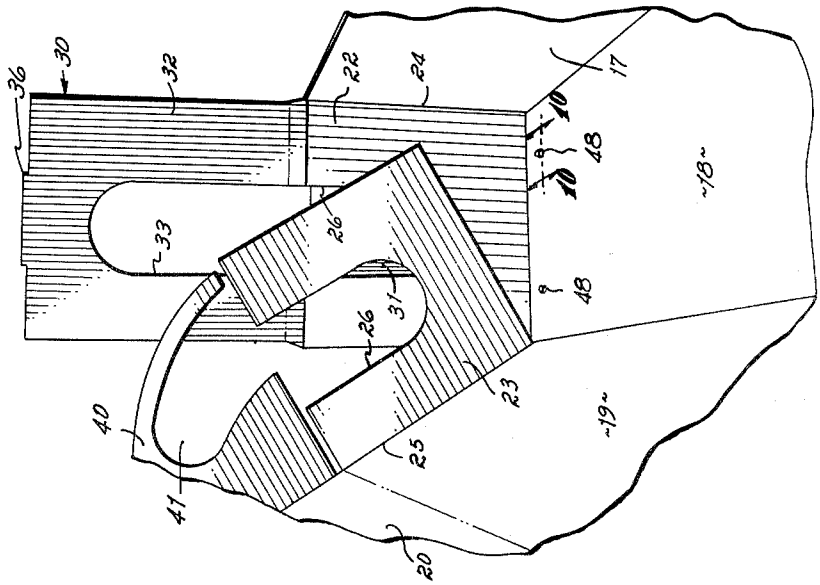

Fig. 3

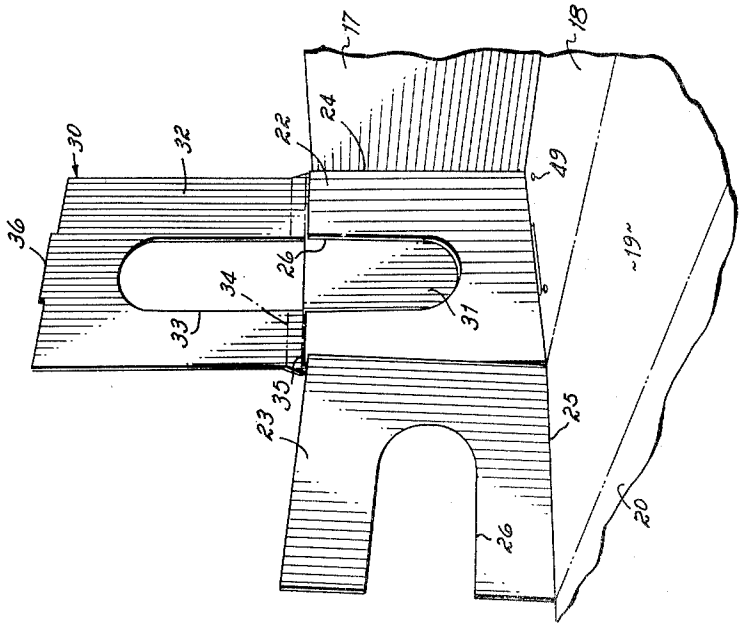

Fig. 4

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DISPENSER FOR ROLL OF SHEET MATERIAL

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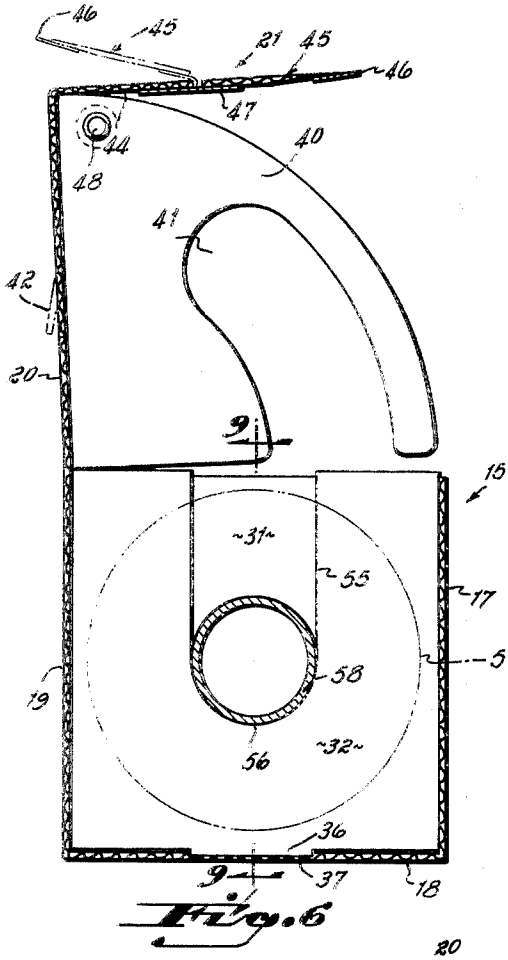

Fig. 6

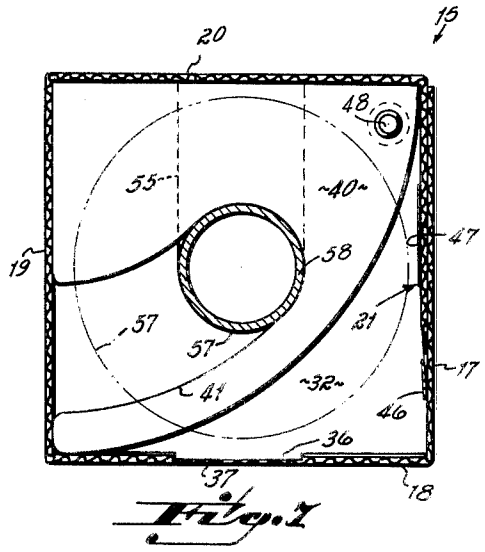

Fig. 7

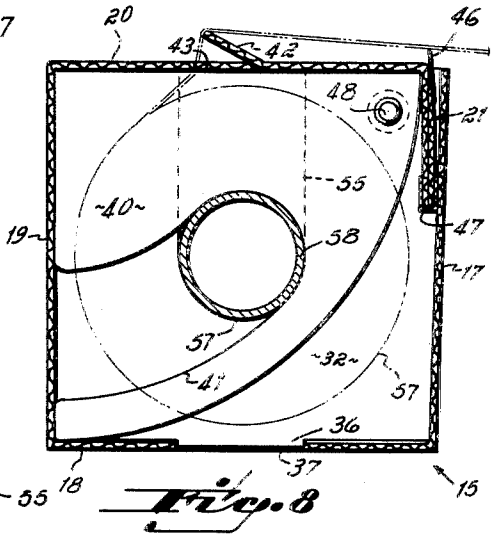

Fig. 8

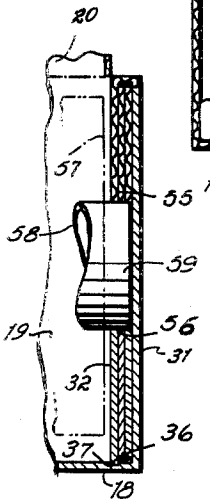

Fig. 9

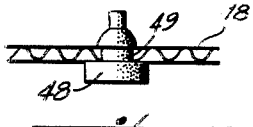

Fig. 10

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DISPENSER FOR ROLL OF SHEET MATERIAL

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Filed Aug. 1, 1963, Ser. No. 299,348
7 Claims. (Cl. 225—39)

This invention relates to a dispenser for a roll of flexible sheet material, the dispenser of the present invention being particularly well adapted for thin films such as Saran (polymer of vinylidene chloride) which tends to cling to surfaces which they engage.

It is the present practice to provide, in dispensers of this type, a box within which a roll of the material is disposed the box having an opening through which the material can be withdrawn and the box having a knife edge against which the material can be pulled in order to tear a desired length from the supply roll. Known boxes are subject to three principal disadvantages outlined below. While all three disadvantages do not appear in every known dispenser, in general the means by which any one of the disadvantages has been overcome is expensive and in many instances renders the box less advantageous in other respects.

The first disadvantage of known dispensers arises when they are used to dispense material such as Saran which tends to cling to the surface of the box after tearing. No provision is made for conveniently grasping a free end of the material in order to pull subsequent lengths out of the box. In other words, when it is desired to pull a length of Saran from the box, the free end of the Saran clings snugly to the surface of the box and must be literally scraped away from the surface of the box, thereby wrinkling and bunching it, in order to grasp the material sufficiently to pull out the subsequent length.

Second, the knife edge is normally disposed at the free edge of a panel or flap of the box whereby the edge is unsupported and the repeated pressure of tearing against the knife edge tends to bend it and/or the panel or flap to which it is secured. The repeated bending so weakens the ability of the knife edge to withstand the pressure of tearing that it gradually becomes ineffective to make a neat rapid tear.

The third disadvantage of known dispenser boxes resides in the manner in which the supply roll is inserted in the box and thereafter is supported. When the supply roll is improperly supported, it will jam in the box and the removal of lengths of material from the supply roll in the box will be made difficult and in some instances the material will be torn merely from the stress of removing the material from the box.

An objective of the invention has been to provide a dispenser box for rolls of flexible sheet material, the box being constructed economically from a one piece blank and the box eliminating the disadvantages of prior boxes as outlined above.

It has been another objective of the invention to provide a dispenser box having a knife edge in the end of the tuck flap of the cover of the box, the tuck flap being foldable upon itself so that when tucked in the box against the front panel of the box the knife edge projects above the open surface of the box and is supported by the front panel. This front panel backing of the knife edge and the flap to which it is attached assures the ability to tear repeatedly against the knife edge without any perceptible distortion of it.

It has been another objective of the invention to provide a dispenser box having means to maintain a substantial portion of the free end of the material spaced from the surface of the box so that it can readily be grasped.

This objective is attained simply and economically by providing a dispensing opening in the cover of the box formed by a flap cut from the cover panel and projecting upwardly from the upper surface of the box. The knife edge is so positioned with respect to the flap that the material to be dispensed must be pulled over the upwardly projecting flap in order to be cut against the knife edge. After cutting, the flap holds the film away from the surface of the box.

Still another objective of the invention is to provide a substantial bearing surface for the ends of a core on which the material is rolled. More specifically the box provides at each end a slot formed by three plies of cardboard, each slot being open at the upper edge of the box so that the core and roll is simply dropped into the box without having to spread the ends of the box in order to accommodate the core. Thus the weakening of the supporting end of the box is eliminated. Further, by having the dispensing opening of the box in the cover panel as described above, when the material is pulled out of the box, the roll is slightly lifted with respect to its bearing support thereby reducing the pressure force which resists the removal of material from the roll.

These and other objectives of the invention will become more readily apparent from the following detailed description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of a dispenser box formed in accordance with the present invention,

FIG. 2 is a perspective view of the top portion of the box illustrating the upwardly projecting flap of the dispensing opening and its relationship to the upwardly projecting knife edge,

FIG. 3 is a plan view of the one piece blank from which the box is constructed,

FIGS. 4 and 5 are fragmentary perspective views illustrating the steps in erecting the box,

FIG. 6 is a transverse cross sectional view showing the cover panel in open condition,

FIG. 7 is a transverse cross sectional view showing the cover in closed condition for shipment,

FIG. 8 is a transverse cross sectional view showing the tuck flap folded to operating position,

FIG. 9 is a cross sectional view taken along lines **9—9** of FIG. 6, and

FIG. 10 is a cross sectional view taken along lines **10—10** of FIG. 5 illustrating a foot pad.

The box **15** is formed from a one piece blank illustrated at **16** in FIG. 3. The blank is formed preferably of double-face corrugated paper board although it should be understood that the invention is not limited to this particular material. The blank has serially interconnected front panel **17**, bottom panel **18**, back panel **19**, cover panel **20** and tuck flap **21**. The front panel **17** and back panel **19** have end flaps **22** and **23** hinged to them along creases **24** and **25** respectively. Each end flap is provided with an open ended slot **26**, each slot forming a part of a three ply bearing surface as will be described below. The bottom panel has at each end an end flap **30** comprising an outer wall **31** and an inner wall **32**, the inner wall having a slot **33** forming a part of the core bearing surface. The end flap **30** is creased along spaced parallel lines **34** and **35** so that it can be folded over the adjacent end flaps **22** and **23**. Each inner wall **32** terminates in a projecting lock tab **36** which is engageable in a recess **37** in the respective ends of the bottom panel **18**. Each recess **37** is formed by partially slitting and compressing the bottom panel **18** along a generally U-shaped line **38**.

The cover panel has a core retainer flap **40** at each end, the retainer flap having an arcuate slot **41** which slides over the core when it is disposed in its bearing slot. The arcuate slot on the retainer flap **40** is not absolutely

necessary to the effective utilization of the dispenser box of the invention but is useful in holding the roll of material in a spaced relation to the inside surface of the walls of the box during shipment and the like. The cover panel also has a spacer flap **42** which is cut from the panel leaving an elongated slot **43** which forms the discharge opening of the box.

The truck flap **21** is formed in two parts. The first part is the member **44** which is integral with the one piece blank. The second part is the member **45** which is a cardboard strip having a knife edge **46** fixed to one edge and a flexible connecting strip **47** secured to the edge. The connecting strip **47** has an adhesive on one surface and joins the member **45** to the member **44**. As stated above, this construction provides a convenience in facilitating the assembly of the knife edge to the box. It should be understood that the tuck flap could be a single cardboard member integral with the one piece blank and having a longitudinal crease for folding purposes and having a knife edge **46** secured to its free edge.

The core retainer flap may also be provided with rubber pads **48** which slide into engagement with the end walls of the box and provide a frictional retention device which holds the cover in position against the force imparted to it when material to be dispensed is pulled through the discharge opening.

The box may be provided with rubber foot pads **48** snapped into holes **49** in bottom panel **18**, as illustrated in FIG. 10.

As shown in FIGS. 4 and 5 the box is erected by swinging the front and back panels **17** and **19** to a perpendicular position with respect to the bottom panel **18** and simultaneously bending the end flaps **22** and **23** inwardly so that the end flaps overlie each other with their slots **26** aligned. End flaps **30** are then folded over the adjacent flaps **22** and **23** with the wall **31** of end flap **30** disposed on the outside of the box and wall **32** disposed on the inside of the box with its slot **33** aligned with slots **26**. The combined two slots **26** and slot **33** provide a slot **55** having a three ply bearing surface **56** to receive the core of a roll of material. When inside wall **32** is folded inside the box, its projecting tab **36** drops into the recess **37** in bottom panel **18** and holds the end flap as well as the front and back panels in an erected condition.

When the box is in this condition, a roll of material indicated at **57** in FIG. 6 and having a cardboard core **58** is dropped into position in the box. The core has projecting ends **59** (FIG. 9) which can pass straight down into the slot at the end of the box without requiring the ends of the box to be spread apart to receive the core. Bearing surface **56** is spaced above the bottom panel **18** a distance sufficient to hold the roll of material in spaced relation to the bottom surface.

The cover panel **20** is swung from the position of FIG. 6 to the closed position of FIG. 7 with the arcuate retaining slot **41** in the flap **40** swinging down over the end **59** of the core **58**. For purposes of shipping or storage of the box, the tuck flap is inserted into the box in extended condition so that the knife edge **46** lies well within the box. When the box is to be used, the cover panel **20** is swung away from the top of the box to the position of FIG. 6 and the tuck flap is folded upon itself as shown in broken lines in FIG. 6. The spacer flap **42** is bent outwardly with respect to the cover panel **20** to leave an opening **43** through which the material can be withdrawn. A short length of the material is passed through the opening **43** and then the cover panel **20** is returned to the position of FIG. 8. In that position, the knife edge **46** projects a slight distance above the upper surface of the cover panel **20** where it can be engaged by the sheet of material to be dispensed. When in this position, the knife edge and the tuck flap to which it is attached are supported at the front by the front panel **17** and at the rear by the cover panel **20**.

When material is to be dispensed, the end of the material is grasped and a sufficient length withdrawn through the opening **43**. It is then pulled down across the knife edge and severed. The spacer flap **42**, whose hinge line is between the opening **43** and knife edge **46**, hold the remaining end portion of the material spaced away from the upper surface of the cover panel so that when the next length of material is to be removed, that end portion can easily be grasped by sliding ones fingers underneath the end portion of the material in the space **60** remaining between the upper surface of the cover panel **20** and the end portion of the material.

I claim:

1. A dispenser for a roll of sheet material comprising,
a box including a front panel and a rear panel,
a cover hinged to said rear panel and having tuck flap extending from its front edge,
the free edge of said flap being constituted by a cutting edge,
said tuck flap being foldable upon itself along a line parallel to said cutting edge and positionable, in folded condition, adjacent the inside surface of said front panel with said knife edge projecting upwardly above the upper edge of said front panel,
said cover having a slot extending parallel to said knife edge, and
an upwardly bendable flap hinged at the edge of said slot between said slot and said knife edge.

2. A dispenser for a roll of sheet material comprising,
a box including a front panel and a rear panel,
a cover hinged to said rear panel and having tuck flap extending from its front edge,
the free edge of said flap being constituted by a cutting edge,
said tuck flap being foldable upon itself along a line parallel to said cutting edge and positionable, in folded condition, adjacent the inside surface of said front panel with said knife edge projecting upwardly above the upper edge of said front panel.

3. A dispenser for a roll of sheet material comprising,
a box including a front panel and a rear panel,
a cover hinged to said rear panel,
an elongated cutting element disposed along one upper corner of said box,
said cover having an elongated opening extending parallel to said cutting element, and
an upwardly bendable flap hinged at the edge of said opening between said opening and said cutting element.

4. A dispenser for a roll of sheet material comprising,
a box including a front panel and a rear panel,
a cover hinged to said rear panel and having tuck flap extending from its front edge,
said tuck flap being constituted by a first member hinged to and integral with said cover, a second member, an adhesive strip joining said first member to said second member, and a knife edge secured to the free edge of said second member, and
said tuck flap being foldable upon itself along said adhesive strip and positionable, in folded condition, adjacent the inside surface of said front panel with said knife edge projecting upwardly above the upper edge of said front panel.

5. A dispenser for a roll of sheet material wrapped on a core whose ends project beyond said roll of material, said dispenser comprising,
a one piece blank having the following serially interconnected members: a front panel, a bottom panel, a back panel, a cover panel, and a tuck flap,
said front and back panels each having at each end a slotted end flap, and
said bottom panel having at each end an end flap constituted by an outside wall and an inside wall hinged along one edge of said outside wall, said inside wall having a slot of the same configuration as the slots in said end flaps, and

when said box is erected said front and back panel end flaps lying adjacent each other and being sandwiched between the walls of said bottom panel end flap with said slots providing a three-ply core bearing surface.

6. A dispenser for a roll of sheet material wrapped on a core whose ends project beyond said roll of material, said dispenser comprising,

a one piece blank having the following serially interconnected members: a front panel, a bottom panel, a back panel, a cover panel, and a tuck flap,

said front and back panels each having at each end a slotted end flap,

said bottom panel having at each end an end flap constituted by an outside wall and an inside wall hinged along one edge of said outside wall, said inside wall having a slot of the same configuration as the slots in said end flaps,

when said box is erected said front and back panel end flaps lying adjacent each other and being sandwiched between the walls of said bottom panel end flap with said slots providing a three-ply core bearing surface, and

said cover panel having at each end a retainer flap which lies adjacent said inside wall and overlies the end of said core when said cover panel is closed.

7. A dispenser for a roll of sheet material wrapped on a core whose ends project beyond said roll of material, said dispenser comprising,

a one piece blank having the following serially interconnected members: a front panel, a bottom panel, a back panel, a cover panel, and a tuck flap,

said front and back panels each having at each end a slotted end flap,

said bottom panel having at each end an end flap constituted by an outside wall and an inside wall hinged along one edge of said outside wall, said inside wall having a slot of the same configuration as the slots in said end flaps,

when said box is erected said front and back panel end flaps lying adjacent each other and being sandwiched between the walls of said bottom panel end flap with said slots providing a three-ply core bearing surface,

said cover panel having at each end a retainer flap which lies adjacent said inside wall and overlies the end of said core when said cover panel is closed,

and rubber friction elements projecting outwardly from said retainer flap and engageable with said inside wall.

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