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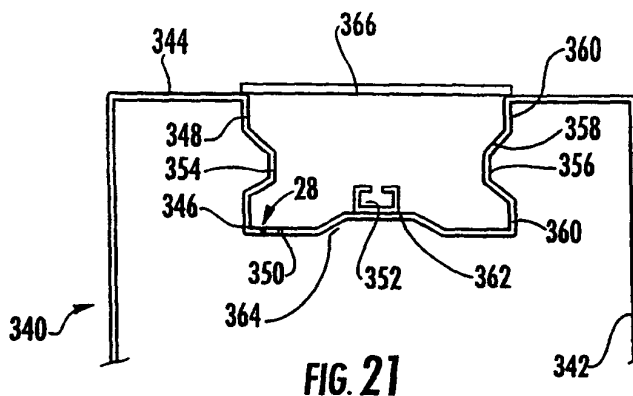
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(54) **Dispenser for web material**

(57) A dispenser (340) for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser. The dispenser has a container (342) formed by at least first, second, and third side walls serially connected to one another along longitudinal edges thereof that form corners of the container (342) and a pair of opposite end walls connected to opposite end edges of the side walls. Defined in the container (342) is an elongate opening through which a portion of the web material can be dispensed. One of the side walls (344) includes a fixed portion and a movable portion that is connected with the fixed portion and is movable between a

stowed position for shipping of the dispenser and an operative position for dispensing web material, the movable portion in the stowed position forming a recessed area (346) that is inside an external geometric profile of the container (342). Affixed to the movable portion is a polymer track and a cutter engaged with the track for cutting a portion of web material dispensed through the elongate opening and laid across the track, the track and cutter being located inside the external geometric profile of the container when the movable portion is in the stowed position, and the track being positioned to have a portion of the web material laid across the track when the movable portion is in the operative position.



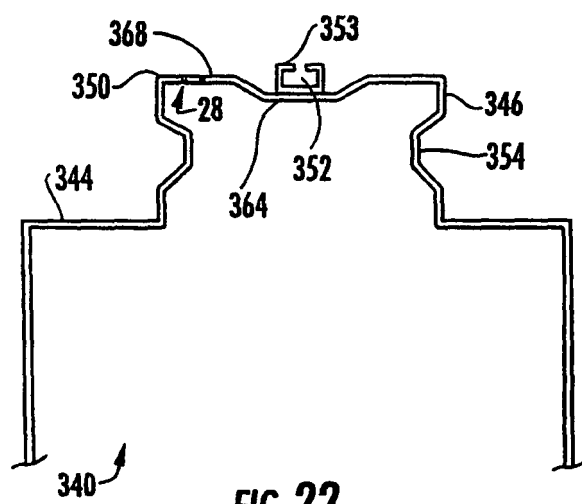


FIG. 22

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to dispensers for web materials, such as plastic film. In particular, the invention relates to containers having a cutting device for cutting across the material as it is dispensed.

[0002] Various containers are known for dispensing web material. Many of these containers use an exposed serrated edge as the means for cutting the web material once dispensed from the container. These serrated edges have several disadvantages. For example, the sharp, exposed serrated edge can inadvertently cut the user or other material that it contacts. Also, the user must engage the web material with the serrated edge by holding the web material in one hand and the container in the other. This awkward arrangement can lead to adverse results such as ineffective cutting, the web material doubling over itself, and so on.

[0003] Some known containers include a track-guided cutting assembly to overcome the problems associated with the use of a serrated edge. An example of such a container is described in commonly assigned U.S. Patent Application Publication No. U.S. 2005/0034585, in the name of Keith E. Antal, said application being herein incorporated by reference. This application describes a box for a roll of web material, with a molded plastic track extending along the box, parallel to the axis of the roll. A cutter is captive in the track. The web material is led out of the box and across the track. The cutter is slid along the track, cutting across the material.

[0004] The track described in the above-mentioned application of Antal is seated in a slot formed in one side of the box. The slot may weaken the box, and the Antal application proposes an additional reinforcing member. In addition, part of the height of the track, and part of the height of the cutter, project above the side of the box. The projecting parts may be inconvenient for packing and stacking the boxes, unless each box is enclosed in a larger lid.

BRIEF SUMMARY OF THE INVENTION

[0005] The present invention in one aspect relates generally to a container for dispensing selected portions of a web material retained within the container. The container has an elongated opening in a wall thereof, through which the web material can be led out of the container. A track is positioned on the exterior parallel to the slot so that the web material can be laid across the track. A cutter slides along the track to cut across the web material. At least in a packaged configuration for shipping, the container has a compact geometrical profile, and the track and cutter do not extend beyond that profile.

[0006] In one embodiment, two adjacent sides of the container are folded inwards to form a recess along the edge where the two sides meet. The track is positioned

within the recess, engaging both of the folded inward sides of the recess.

[0007] In another embodiment, parts of two adjacent sides are folded inwards to form a recess along the edge where the two sides meet. Parts of the two adjacent sides at the ends of the recess are not folded inwards. The track is positioned within the recess. The ends of the track are retained under the unfolded parts of the sides.

[0008] In another embodiment, the track and cutter do not project outward of imaginary continuations of the two adjacent sides over the recess. A removable cover is provided over the track and cutter, generally following the outline of the container profile without the recess.

[0009] In a further embodiment, the cutter runs in a slot or cutter guide in the track. The cutter has a projecting portion or handle by which a user can grip the cutter. The cutter is configured to be rotatable or foldable into a shipping position to reduce the profile of the cutter assembly during shipping.

[0010] In a further embodiment, the track is mounted on a part of the container that is movable between a shipping position in which the cutter track is inside the exterior profile of the container and an operative position in which the cutter track is outside the exterior profile of the container and faces outwards.

[0011] The present invention in another aspect relates generally to a container for dispensing selected portions of a web material retained within the container. The container has an elongate opening in a wall thereof, through which the web material can be led out of the container. A track is positioned on the exterior parallel to the slot so that the web material can be laid across the track. A cutter slides along the track to cut across the web material. Two adjacent sides of the container are folded inwardly to form a recess along the edge where the two sides meet. The track is positioned within the recess, engaging both of the inwardly folded sides of the recess.

[0012] The present invention in another aspect relates generally to a container for dispensing selected portions of a web material retained within the container. A track is positioned on the exterior so that the web material can be laid across the track. A cutter slides along the track to cut across the web material. The track is mounted bridging side edges of the container.

[0013] In one embodiment, the track has pairs of flanges along both sides of the track, and free edges of adjacent sides of the container are received between the flanges.

[0014] According to an aspect of the present invention is a dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising a container formed by at least first, second, and third side walls serially connected to one another along longitudinal edges thereof that form corners of the container and a pair of opposite end walls connected to opposite end edges of the side walls, each of the side walls having at least a major portion that is

substantially planar and is angularly oriented relative to the side walls adjacent thereto, the planar major portions of the side walls defining an external geometric profile of the container; an elongate opening defined in one of the side walls through which a portion of the web material can be dispensed; one of the corners of the container defining a recessed area formed by a first wall portion that connects with the first side wall and a second wall portion that connects with the second side wall, the first and second wall portions extending inwardly away from the external geometric profile and toward an interior of the container and being connected to each other at a concave corner, such that the recessed area is inside the external geometric profile; a polymer track affixed to the container and disposed in the recessed area such that the track is inside the external geometric profile; a cutter engaged with the track and slidable therealong for cutting a portion of web material dispensed through the elongate opening and laid across the track, wherein the cutter is entirely inside the external geometric profile; and wherein the recessed area has a length less than that of the first and second side walls and opposite ends of the track are overhung by non-recessed portions of the side walls.

[0015] Other embodiments of the invention are also described herein and claimed in the appended claims.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

[0016] Having thus described the invention in general terms, reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

[0017] The finger openings may be defined through the container adjacent the elongate opening.

[0018] The track may be adhered to at least one of the first and second wall portions forming the recessed area. The track may have a base portion and a rail portion joined to the base portion, the base portion may have a generally triangular cross-sectional shape and may be adhered to the first and second wall portions adjacent the concave corner therebetween such that the rail portion is obliquely oriented relative to each of the first and second wall portions.

[0019] The base portion of the track may be formed in part by two walls that extend obliquely relative to the rail portion and that have distal edges that are spaced apart to define a gap therebetween.

[0020] The base portion of the track may be formed in part by two walls that extend obliquely relative to the rail portion and that have distal edges that are joined together.

[0021] The container may have a generally triangular cross-sectional shape.

[0022] The container may include a fourth side wall and may have a generally square or rectangular cross-sectional shape.

[0023] The dispenser may further comprise a removable cover that covers the track and cutter.

[0024] According to a further aspect of the present invention is a dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising a container formed by at least first, second, and third side walls serially connected to one another along longitudinal edges thereof that form corners of the container and a pair of opposite end walls connected to opposite end edges of the side walls; an elongate opening defined in the container through which a portion of the web material can be dispensed; one of the side walls including a fixed portion and a movable portion that is connected with the fixed portion and that is movable between a stowed position for shipping of the dispenser and an operative position for dispensing web material, the movable portion in the stowed position forming a recessed area that is inside an external geometric profile of the container; a polymer track affixed to the movable portion and a cutter engaged with the track and slidable therealong for cutting a portion of web material dispensed through the elongate opening and laid across the track, the track and cutter being located inside the external geometric profile of the container when the movable portion is in the stowed position, and the track being positioned to have a portion of the web material laid across the track when the movable portion is in the operative position.

[0025] The movable portion may be formed by first and second portions of the side wall that are hingedly connected to the fixed portion and to each other. The movable portion may be formed by first, second, and third portions of the side wall, the first and third portions being respectively hingedly connected to opposite parts of the fixed portion and extending generally perpendicular to the fixed portion and parallel to each other, and the second portion being connected between distal ends of the first and third portions, the track being affixed to the second portion.

[0026] Each of the first and third portions of the side wall may include a fluted section to facilitate moving the movable portion from the stowed position to the operative position.

[0027] According to a further aspect of the present invention is a dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising: a container formed by at least first, second, and third side walls serially connected to one another along longitudinal edges thereof that form corners of the container and a pair of opposite end walls connected to opposite end edges of the side walls; an elongate opening defined in the dispenser through which a portion of the web material can be dispensed; the first and second side walls being adjacent and having free edges that are proximate each other at one corner of the container; a polymer track affixed to

the first and second side walls such that the track bridges between the free edges and substantially fixes the first and second side walls against relative movement therebetween, the track defining a cutter guide; and a cutter engaged with the cutter guide and slidable therealong for cutting a portion of web material dispensed through the elongate opening and laid across the track.

[0028] The track may include a pair of first flanges structured and arranged to receive the free edge of the first side wall therebetween, and a pair of second flanges structured and arranged to receive the free edge of the second side wall therebetween.

[0029] The first and second flanges may be structured and arranged to form friction fits with the free edges of the first and second side walls, respectively.

[0030] Adhesive may bond the first and second flanges to the first and second side walls, respectively.

[0031] The track may define an internal guide and the cutter includes a foot that resides in the guide and slides therein, wherein the track defines a slot leading out from the guide and the cutter may include a handle portion connected to the foot and projecting out through the slot for grasping to slide the cutter along the track, the track and cutter may be structured and arranged such that the cutter is rotatable relative to the track between a shipping position and an operative position.

[0032] One of the first and second side walls may define a cutout adjacent the track for at least partially containing the handle portion of the cutter in the shipping position.

[0033] The first and second side walls may be substantially perpendicular to each other, and the track may extend between the free edges at an oblique angle to each of the first and second side walls such that the track and cutter are inside an exterior geometric profile of the container defined by the side walls.

[0034] The first and second side walls may be substantially perpendicular to each other, and the track may define a recess and the cutter guide may be disposed in the recess such that the cutter guide and cutter are inside an exterior geometric profile of the container defined by the side walls.

[0035] The elongate opening may be defined in the track.

[0036] The dispenser may further comprise a removable cover arranged to cover the track and cutter in a shipping configuration of the dispenser.

[0037] According to a further aspect of the present invention is a dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising: a container for enclosing a supply of the web material; an opening defined in the container, through which a portion of the web material can be dispensed; a panel hingedly connected to the container and movable between a shipping position covering the opening with an inner surface of the panel facing an interior of the container, and a dispensing po-

sition uncovering the opening and positioning the panel with the inner surface thereof facing outward; and a track affixed to the inner surface of the panel, and a cutter engaged with the track and slidable therealong for cutting a portion of the web material dispensed through the opening and laid across the track when the panel is in the dispensing position.

[0038] The track may be positioned to reside at least partially in the opening when the panel is in the shipping position.

[0039] The panel may have a free edge positioned proximate an adjacent side wall of the container when the panel is in the shipping position, and the track may be affixed to the panel adjacent the free edge thereof.

[0040] The adjacent side wall of the container may include a skirt portion that overlaps an outer surface of the panel and is secured thereto when the panel is in the shipping position.

[0041] The adjacent side wall of the container may define a fold or tear line to permit the skirt portion to be folded back or torn off to enable the panel to be moved to the dispensing position.

[0042] According to a further aspect of the present invention is a dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising: a box defined by a series of walls joined together to form an enclosed space for retaining the web material and defining an opening through which the web material can be led out of the box, at least one of the walls defining a lip adjacent the opening; a track secured to the lip and positioned such that web material led out of the box through the opening can be laid across the track; a cutter retained within the track and slidable along the track for cutting web material laid across the track; and a lid capable of covering the opening in a closed position, the lid hingedly secured to one of the walls of the box and having a flap extending over and covering, in at least an initial shipping condition, the track, cutter and lip, wherein the track and cutter do not extend beyond an outline of the box.

[0043] The track may include a pair of flanges structured and arranged to receive the lip therebetween.

[0044] The flanges may be structured and arranged to form a friction fit with the lip.

[0045] The flanges may define fins that engage the lip and resist detachment of the track from the lip.

[0046] According to a further aspect of the present invention is a dispenser for containing a supply of a first web material and a supply of a second web material and for dispensing portions of the web materials and severing the portions from the remaining web materials in the dispenser, comprising: a box defined by a series of walls joined together to form an enclosed space for retaining the web materials, the box including a recessed area that is recessed inward of an exterior geometric profile of the box defined by the walls, the recessed area comprising a bottom wall having opposite longitudinal edges and a

pair of side walls respectively joined to the opposite longitudinal edges of the bottom wall; an opening defined in the bottom wall through which the web materials can be led out of the box; a first track affixed in the recessed area proximate one of the side walls and a second track affixed in the recessed area proximate the other of the side walls, each track defining a cutter guide; and a first cutter engaged with cutter guide of the first track and slidable therealong for cutting a portion of the first web material dispensed through the opening and laid across the first track, and a second cutter engaged with cutter guide of the second track and slidable therealong for cutting a portion of the second web material dispensed through the opening and laid across the second track.

[0047] The side walls of the recessed area may be inclined at oblique angles relative to the bottom wall, and the tracks may be affixed to the side walls.

[0048] According to a further aspect of the present invention is a dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising: a box of generally rectangular cross-section defined by first, second, third, and fourth walls that are serially connected to form an enclosed space for retaining the web material, the box defining an opening through which the web material can be led out of the box, the box having an angled corner formed by a sloping wall that extends between an edge of the first wall and an edge of the fourth wall; a track secured to the sloping wall and positioned such that web material led out of the box through the opening can be laid across the track; a cutter retained within the track and slidable along the track for cutting web material laid across the track; and a lid hingedly secured to one of the walls of the box and pivotable between a closed position and an open position, the lid comprising a first panel that in the closed position is co-planar with the first wall of the box, and a second panel that is perpendicular to the first panel, such that in the closed position the first and second panels of the lid form a fourth corner of the box that covers the sloping wall and the track and cutter.

[0049] The lid may further comprise opposite end panels joined to opposite ends of the lid perpendicular to the first and second panels.

FIG. 1 is a perspective view of a first embodiment of a dispenser as contemplated by the invention;

FIG. 2 is an enlarged section through part of the dispenser shown in FIG. 1, including a cutter assembly;

FIG. 3 is a section through a cutter rail forming part of the cutter assembly shown in FIG. 1;

FIG. 4 is a section through an alternative form of cutter rail;

FIG. 5 is a section through a further alternative form

of cutter rail;

FIG. 6 is a perspective view of a second embodiment of a dispenser as contemplated by the invention;

FIG. 6A is a section along the line 6A-6A in FIG. 6.

FIG. 7 is a perspective view of a box forming part of a third embodiment of a dispenser as contemplated by the invention.

FIG. 8 is a sectional view through the box shown in FIG. 7 and a rail that is combined with the box in forming the third embodiment of a dispenser as contemplated by the invention.

FIG. 9 is a detail sectional view similar to part of FIG. 8 showing the box and rail assembled together.

FIG. 10 is a perspective view of a fourth embodiment of a dispenser as contemplated by the invention, in a closed condition.

FIG. 11 is a perspective view of the dispenser shown in FIG. 10, in an open condition.

FIG. 12 is a perspective view of a fifth embodiment of a dispenser as contemplated by the invention.

FIG. 13 is a perspective view of a sixth embodiment of a dispenser as contemplated by the invention.

FIG. 14 is a perspective view of a further embodiment of a dispenser as contemplated by the invention.

FIG. 15 is a detail view of a lid forming part of the dispenser shown in FIG. 14.

FIG. 16 is a cross section through part of a further embodiment of a dispenser as contemplated by the invention.

FIG. 17 is a cross section through part of a further embodiment of a dispenser as contemplated by the invention, in a closed condition.

FIG. 18 is a cross section through part of the dispenser shown in FIG. 17, in a partly open condition.

FIG. 19 is a partly exploded fragmentary perspective view of a further embodiment of a dispenser as contemplated by the invention.

FIG. 20 is a fragmentary perspective view of the dispenser shown in FIG. 19, in an alternative condition.

FIG. 21 is a cross section through part of a further embodiment of a dispenser as contemplated by the

invention, in a condition for storage.

FIG. 22 is a cross section through part of the dispenser shown in FIG. 21, in a condition for use.

FIG. 24 is a cross section through part of the dispenser shown in FIG. 23, in a condition for use.

FIG. 25 is a cross section through part of a further embodiment of a dispenser as contemplated by the invention, in a condition for storage.

FIG. 26 is a cross section through part of the dispenser shown in FIG. 25, in a condition for use.

FIG. 27 is a cross section through part of a further embodiment of a dispenser as contemplated by the invention.

FIG. 28 is a cross section through part of a further embodiment of a dispenser as contemplated by the invention.

FIG. 29 is a cross section through part of a further embodiment of a dispenser as contemplated by the invention.

FIG. 30 is a perspective view of a still further embodiment of a dispenser as contemplated by the invention.

FIG. 31 is an enlarged, partial cross section through part of the embodiment of a dispenser as shown in FIG. 30.

FIG. 32 is a partial cross section view of the track portion of the dispenser shown in FIGS. 30 and 31.

FIG. 33 is a cross section view of a still further embodiment of a dispenser as contemplated by the invention.

FIG. 34 is a perspective view of a cutter rail of the dispenser shown in FIG. 33.

DETAILED DESCRIPTION OF THE INVENTION

[0050] The present inventions now will be described more fully hereinafter with reference to the accompanying drawings in which some but not all embodiments of the inventions are shown. Indeed, these inventions may be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will satisfy applicable legal requirements. Like numbers refer to like elements throughout.

[0051] In the drawings, there are shown various embodiments of a container for storing and dispensing rolled

web material, for example, plastic wrap. Referring to FIGS. 1 and 2 and initially especially to FIG. 1, a first form of container, identified generally by the numeral **10**, comprises a box **12** that is long and thin and is approximately square in cross section. The box **12** has a body with two ends **14**, three sides **16**, **18**, **20**, and a lid **22**. One long edge of each of the sides **16** and **20** joins the long edges of the side **18**. The lid **22** is hinged to the other long edge of the side **20**. The lid **22** may include a flap that tucks inside the side **20** when the box is closed or may be removed by means of perforations (not shown). The lid **22** can be opened for access to the interior of the box **12**. A slot **28** is formed extending most of the length of the side **16**. The slot **28** may be formed initially by scoring or otherwise forming a line of weakness through the material of the side **16**, to define a strip that can be removed from the box **12** or a flap that can be raised to open or expose the slot **28**.

[0052] In use, plastic film or other web material **30** is retained on a hollow core **32** positioned within the box **12**. The web material **30** may be, for example, polyethylene film, polyvinyl chloride film, gift-wrap paper, freezer wrap paper, foil, or the like. The hollow core **32** may be supported for easy rotation on roll supports (not shown) formed on the insides of the ends **14**. For shipping, the material **30** and the core **32** may be contained entirely within the closed box **12**. For use, a free end **34** of the film material **30** is led off the core **32** and through the slot **28** to the exterior of the box: The free end **34** may be positioned by opening the box **12**, opening the slot **28**, feeding the film material **30** through the slot **28**, and closing the lid **22**.

[0053] Referring now especially to FIG. 2, a recess **36** is formed along the edge of the box **12** where the sides **16** and **18** meet. The recess **36** is formed by scoring the sides **16** and **18** parallel to the edge, and folding strips of material **38** and **40** inward at the score lines **42**, **44**. The fold that would otherwise form the convex edge between the sides **16**, **18** is inverted to form a concave edge between the strips **38**, **40**. The ends of the strips **38**, **40** are formed by cuts **46** through the material of the sides **16**, **18** a short distance from the box ends **14**, so that at each end of the recess there is a short overhang section **48** where the sides **16**, **18** extend to meet at a convex edge of the box. An opening **50** is formed between the recess **36** and the interior of the box **12** under the overhang **48**. Further openings **52** are illustrated in the box side **16** (top) near each end of the recess **36** and serve as finger holes for assisting in grabbing web material. Alternatively, overhangs **48** may be omitted, with the recess **36** continuing to the box ends **14**.

[0054] Referring to FIGS. 2 and 3, a track or rail **60** is positioned in the recess **36**. The rail **60** is generally pentagonal in cross section, with two basal faces **62** formed approximately at right angles. The basal faces **62** preferably do not meet, but form a gap **63** between them. Two substantially parallel side walls **64** extend from the outer edges of the basal faces **62**. Two substantially co-

planar distal faces **66** extend inwards from the distal edges of the side walls **64** and form between them a slot **68**. The two sides of the rail **60** are connected by a transverse wall **69**. The rail **60** is positioned in the recess **36**, with the basal faces **62** positioned flat against the strips **38, 40** forming the recess **36**. The gap **63** allows flexibility if the basal faces **62** are not at exactly the same angle as the box strips **38, 40**. The rail **60** is so dimensioned that the entire rail **60** is inside the effective profile extension of the box sides **16, 18** above the recess **36**. The distal faces **66** are outside an imaginary plane joining the fold lines **42, 44** at the edges of the recess, so that web material can readily be laid across the rail **60** in contact with the distal faces **66**. The rail **60** is preferably longer than the recess **36**, with the ends of the rail **60** located under the overhangs **48**. The rail **60** may be substantially as long as the distance between the box ends **14**. The rail **60** may be attached to the box **12** by strips of adhesive, double-sided adhesive tape or the like, attaching both basal faces **62** to the strips **38, 40** forming the recess **36**. Alternatively, the rail **60** may be retained solely by its ends being captive under the overhangs **48**. Where the overhangs **48** are used to retain the rail **60**, the ends of the rail **60** may be provided with end caps, or may be deformed to fit closely under the overhangs **48** so that the rail **60** does not tip over or move around undesirably in use.

[0055] A cutter assembly **70** is positioned within the rail **60**. The cutter includes a foot **72** positioned, a neck **74** extending out through the slot **68**, and a head **76** positioned outside the rail **60**. Again, the head **76** is preferably positioned inside the effective profile extensions of the box sides **16, 18** above the recess **36**. The neck **72** includes a cutter blade or blades. The cutter **70** is arranged to be slid along the slot **68**, with the cutter blade(s) facing along the slot. The cutter **70** can be assembled with the rail **60** by inserting the foot **72** into the interior of the rail **60** from one end before the rail is assembled with the box **12**, and before any end cap or deformed end is provided. When the container **10** is fully assembled, the foot **72** is captive within the rail **60** in a sufficiently close fit relationship so as to restrain the cutter **70** from tipping or twisting. The cutter blade(s) may be of any form desired. The box ends **14** may extend to the undersides of the overhangs **48**, and may provide end stops for the cutter assembly **70**. Where the overhangs **48** are not present, the box ends **14** may project outside the strips **38, 40** far enough to provide end stops for the cutter assembly **70**. Alternatively, the rail **60** may be deformed at the ends, or provided with separate end stops.

[0056] The faces **66** of the rails **60** on which the web material **30** rests for cutting, or the surfaces of the box sides **16, 18** adjacent to the recess **36**, may be made of, or coated with, a material that tends to retain the film material **30** weakly, for example, by cling, static cling, or tack. An example of materials for use in retaining film during cutting is described in U.S. Patent Application No. 11/071,422, filed March 3, 2005 in the name of Rudolf

Pavlik, which is incorporated herein by reference in its entirety.

[0057] As may be seen from the drawings and the above description, the cutter assembly **70** is clearly visible on the outside of the box **12**, but is entirely within the box profile as defined by the faces **14, 16, 18, 20** and **22**. Thus, the container **10** can be shipped and stored with the cutter assembly **70** assembled and installed, but can still be packed, stacked, and displayed efficiently and stably like an ordinary rectangular box.

[0058] If the web material is cling wrap or other material that is to be used in contact with food, it may be desired to protect the cutter assembly from potential contamination during shipping and storage. It may also be desired to seal off any openings into the interior of the box **12**, such as the slot **28**, the openings **50** under the overhangs **48** and the finger holes **52**. The entire container **10** may thus be wrapped in any suitable wrapping material, such as, for example, shrink wrap or non-shrink wrap. A guard, such as a rigid portion made of plastic or paperboard, may be provided over the recess **36**, and optionally also over the slot **28**. Such a guard may be, for example, in the form of an L-shaped strip or in the form of a cap over the entire side **16** and extending down the sides **18** and **22** and the ends **14**. Such a guard may be retained in place by an outer wrapping, adhesive tape or the like, or may be attached to the box **12** by a peelable adhesive. A flap may also be formed as part of the lid **16**, initially extending over the recess **36** and attached to the box side **18**. The end user may then tear off the parts of the flap that cover the recess **36** and the slot **28**, and leave a short flap that can be tucked in under a slot in the box side **16** or the like.

[0059] In order for the potential purchaser to be able to see that the container **10** has a built-in cutter assembly, it may be preferred for the wrappings and coverings over the recess **36** to be transparent.

[0060] In use, any external packaging or wrapping materials are removed. The container **10** may be supplied with a core **32** of web material **30** inside it or, especially if the container **10** is being reused, a separate roll of web material may be supplied by the user. The length of the core **32**, and the width of the web material **30**, are selected such that the web material will pass through the slot **28**, and such that the cutter **70** can travel over the entire width of the web material. The cutter may be arranged to slide into the spaces under the overhangs **48** as far as the insides of the box ends **14**, in order to increase the travel of the cutter and thus the width of web material **30** that the container **10** can dispense. The holes **52** are positioned so that the side edges of the web material **30** overlie the holes, and fingers can be inserted in the holes to grasp the edges of the web material.

[0061] The cutter **70** is positioned at one end of the rail slot **68**, but no other assembling or installation of the cutter assembly by the user is required. The film material **30** is led out of the slot **28** in the box **12** and across the recess **36**, and is laid down onto the distal faces **66** of

the rail **60**. The film material **30** is positioned with a desired length at the free end **34** beyond the slot **68**, and laid down onto the box side **18**. Then, the cutter **70** is slid across the film material **30** to the other end of the rail **60**. The cut length of web material **30** is lifted off the box **12** and removed. When another cut length of the web material **30** is needed, the free end **34** is lifted by a finger in one or each of the holes **52** and moved forward across the rail **60**. If the cutter **70** has a cutter blade at only one end, the cutter is returned to the starting position before advancing the web material.

[0062] Referring now to FIG. 4, a second form of the rail **80** is generally pentagonal in cross section, with two basal faces **82** approximately at right angles. Two roughly parallel side walls **84** extend from the outer edges of the basal faces. Two roughly coplanar distal faces **86** extend towards each other from the distal edges of the side walls **84** and form between them a slot **88**. Unlike the first form of rail **60**, the basal faces **82** meet and join together the two sides of the rail **80**. A transverse wall **69** is not required, and in the rail shown in FIG. 4 is not present. The second form of rail **80** is dimensioned and positioned similarly to the first form of rail **60**.

[0063] Referring now to FIG. 5, a third form of the rail **90** is generally triangular in cross section, with two basal faces **92** meeting approximately at right angles. Two roughly coplanar distal faces **96** extend inwards from the distal edges of the basal faces **92**, without intervening side walls **64**, **84** and form between them a slot **98**. The rail **90** is positioned in the recess **36**, with the basal faces **92** flat against the strips **38**, **40** forming the recess. The rail **90** is so dimensioned that the edges between the basal faces **92** and the distal faces **96** are close to the fold lines **42**, **44** at the edges of the recess **36**. The foot **72** of the cutter **70** is appropriately shaped to fit into the triangular interior of the rail **90**. The container **10** incorporating the third form of rail **90** is otherwise constructed or used in substantially the same way as the container **10** incorporating the first form of rail **60**.

[0064] Referring now to FIGS. 6 and 6A, a second form of container and dispenser for web material, indicated generally the reference numeral **110**, comprises a box **112** of generally triangular prismatic shape, with two triangular ends **114**, and three sides **116**, **118**, **120**. The edges between the sides **116**, **118**, **120** as illustrated are rounded. However, a sharp angled transition (such as that illustrated in FIGS. 7 and 8) or some other form may be provided, if so desired. One side **118** has a slot **122** similar to the slot **28** shown in FIG. 1, widened near the ends to form finger holes **124**. The edge **126** between the sides **116**, **118** is indented to form a recess **128** defined by two flat strips, similar to the recess **36** shown in FIGS. 1 and 2. By selecting the relationship between the width of the recess **128** and the curvature of the edge **126**, a desired angle between the two flat strips, for example a recess with the strips at right angles similarly to the strips **42**, **44** shown in FIGS. 1 and 2, may be produced.

[0065] As shown in FIG. 6, the recess **128** does not extend the full length of the edge **126**, and overhangs **130** remain at the ends. A rail **60**, **80**, **90** is positioned in the recess **128**, and a cutter **70** slides in the rail, as described with reference to FIG. 2. The head **74** of the cutter **70** may be differently shaped from that shown in FIG. 2, because of the different constraint of fitting the head **74** within the imaginary continuation of the sides **116**, **118** and the curved edge **126**. The container **110** shown in FIG. 6 is otherwise similar, and is used similarly, to the container **10** shown in FIGS. 1 to 3. Containers **110** may be stacked and stored as triangular prisms.

[0066] Referring now to FIG. 7, a further form of container indicated generally by the reference numeral **140** comprises a box **142**, which is shown in FIG. 7 as a triangular box, with a cutout **144** along most of the length of an edge **146** between two sides **148**, **150**. A rail **152** comprises a base **154**, two side walls **156** upstanding from either side of the base, and two distal walls **158** extending inwards from the distal edges of the side walls **156** and defining a slot **160**. A cutter **70** fits into the rail **152** and projects through the slot **160**, as described above with reference to FIGS. 2 and 3. The rail **152** has two pairs of legs **162**, **164** extending downwards and outwards from the base **154**. Each pair of legs **162**, **164** defines a slot into which the edge **166** of one of the box sides **148**, **150** fits. The inner legs **164** are flexible, and are angled inwards at their free edges **168** so that the free edges fit between the box edges **166**.

[0067] To assemble the container **140**, the rail **152** is pushed onto the box edges **166**. The leg free edges **168** fit between the box edges **166**, and as the rail is pushed in the inner legs **164** deflect inwards and then snap outwards, holding the rail **152** in place. When the rail **152** is fully in place, the box sides **148**, **150** may be gripped between the outer rail legs **162** and the resilient inner legs **164**, if the spacing between the legs in their unstressed condition is less than the thickness of the box sides **148**, **150**. Alternatively, or in addition, the legs **162**, **164** may be secured to the box sides **148**, **150** by adhesive.

[0068] Referring now to FIGS. 10 to 12, a further form of container indicated generally by the reference numeral **170** comprises a box **172** with a lid **174** that overlies approximately half of one side **176** of the box and is hinged at **177** along the midline of the box side **176**. The free edge **178** of the lid **174** is provided with a tab **180** that fits into a slit **182** in the edge of the side **176** to locate and secure the lid when the lid is closed. A slot **184**, through which web material **30** is led out of the box **172**, is formed in the box side **176** under the lid **174**. A rail **186** with a cutter **188** is attached to the underside of the lid **174**, and is so positioned that when the lid is closed the rail projects through the slot **184** into the interior of the box **172**.

[0069] The container **172** is shipped and stored with the lid **174** closed, as shown in FIG. 10, and then has a rectangular shape that is easily and efficiently stored,

stacked, and displayed. To use the container, the lid **174** is opened, from the condition shown in FIG. 10, in the direction of the arrows in FIGS. 10 and 11, to the open condition shown in FIG. 12. When the lid **174** is open, the lid overlies the other half of the box side **176**, with the rail **186** and cutter **188** exposed. As shown in FIG. 12, the web material **30** is then led out of the slot **184** and across the rail **186**, where it may be cut off by the cutter **188**.

[0070] Referring now to FIG. 13, a further form of container indicated generally by the reference numeral **200** comprises a generally square or rectangular box **202** formed by a series of four serially connected walls comprising a first wall **206**, a second wall (not numbered) connected to the first wall and perpendicular thereto, a third wall (not numbered) connected to the second wall and perpendicular thereto (and therefore parallel to the first wall **206**), and a fourth wall **208** connected to the third wall and perpendicular thereto (and therefore perpendicular to the first wall **206**). The first wall **206** has a smaller width than the opposite third wall, and the fourth wall **208** has a smaller width than the opposite second wall. The box has an angled corner formed by a sloping wall **204** that extends between one edge of the first wall **206** and an adjacent edge of the fourth wall **208**. A rail **210** with a cutter **212** is mounted on the sloping wall **204**, inside the imaginary extensions of the walls **206**, **208**. A slot **28** is formed in the first wall **206**. A lid **214** is hinged to the box **202** at the edge of the first wall **206** farther from the sloping wall **204**. The lid covers the first wall **206** and has skirts or covers **216** on all sides except the hinge side.

[0071] When the lid **214** is closed the skirts **216** overhang the side edges of the box **202** and the top edge of the fourth wall **208**, completely enclosing the rail **210** and cutter **212**. The lid **214** may be of transparent material, so that the rail and cutter assembly is visible when the lid is closed. When the lid is opened, the slot **28** and the cutter assembly **210**, **212** are preferably exposed. Web material may then be fed out of the slot **28** and over the rail **210**. Lengths of web material may then be cut off and dispensed as described above.

[0072] Referring now to FIGS. 14 and 15, a further form of container indicated generally by the reference numeral **220** comprises a box **222** with an angled corner formed by a sloping wall **224** that extends between two adjacent orthogonal sides **226**, **228** of the box. A rail **230** with a cutter **232** is mounted on the sloping wall **224**, inside the imaginary extensions of the sides **226**, **228**. As shown in FIG. 14, the sloping wall **224** is angled inwards from the plane of the side **226**. A slot **28** is formed in the box side **226**. A lid **234** is hinged to the box **222** along the angle where the box side **226** and the sloping wall **224** meet. The free edge of the lid **234** is secured to the box side **228** by a fastener **236**, such as adhesive tape **236**, hook and loop type fasteners, or the like. The lid has two end skirts extending beyond the sloping wall **224** at the box ends and a front skirt **234A**, as best shown in FIG. 15.

[0073] When the lid **234** is closed the skirts **238** overhang the ends of the box **222** and the lid is fastened to the box side **228**, completely enclosing the cutter assembly **230**, **232**. The lid **234** may be of transparent material, so that the cutter assembly is visible when the lid is closed. To bring the container **220** into use as a dispenser, the fastener **236** is released, and the lid **234** is opened. The lid **234** is then torn off along the line where the lid joins the box side **236**, exposing the rail and cutter assembly **230**, **232**. Web material may then be fed out of the slot **28** and over the rail **230**. Lengths of web material may then be cut off and dispensed as described above.

[0074] Referring now to FIG. 16, a further form of container indicated generally by the reference numeral **240** comprises a box **242** with two adjacent sides **244**, **246** that meet at a corner **247**. The side **244** has a skirt **248** that extends round the corner and overlies a free edge **250** of the side **246**. A rail **252** for a cutter assembly is mounted on the inside (with the box closed) of the side **246** near the free edge **250**, with a preformed fold line **254** in the box side **246** on the side of the rail **252** away from the free edge **250**. A preformed fold line, tear line, tear strip or the like **256** is formed in the box side **244** near to the corner **247**. The free edge **250** of the box side **246** is thus retained under the skirt **248**. During shipment of the container, skirt **248** is preferably secured to box side **246**, by adhesive or the like.

[0075] To open the box, the skirt portion **248** is torn off or folded back at the line **256**, releasing the free edge **250** of the box side **246**. The box side **246** is then folded back at the fold line **254**, so that the part carrying the cutter rail **252** lies flat against the outside of the box **242**, with the cutter rail exposed. An adhesive or fastener is preferably provided to secure the free edge **250** to the face of the box side **246**. Web material may then be led out of the box **242** through the gap formed between the fold line **254** and the fold or tear line **256**, and laid over the cutter rail **252**. Lengths of web material may then be cut off by a cutter assembly (not shown) riding in the gap of the rail and dispensed as described above.

[0076] Referring now to FIGS. 17 and 18, a further form of container **260** comprises a box **262**, one side **264** of which comprises two flanges **266**, **268** extending from the adjacent box sides **270**, **272** and defining between them a space **274**. An outer panel **276** covers the box side **264** and is bonded to the flanges **266**, **268**. The middle of the outer panel **276** has a cutter rail **278** attached to its inner side where the panel spans the space **274**. The outer panel **276** is provided with a tear strip **280** near to the free edge of one flange **266**. The outer panel **276** may be formed with a fold line near to the free edge of the other flange **268**. Alternatively, the edge between the unsupported outer panel **276** and the outer panel bonded to the flange **268** may provide a sufficiently definite fold line.

[0077] To open the box **262**, the middle of the outer panel **276** is separated from the flange **266** by use of the tear strip **280**, and the unsupported middle of the outer

panel is folded back at the free edge of the flange **268** as shown by the arrow **282** in FIG. 18, until the cutter rail **278** lies, facing outwards, on the flange **268** or the box side **272**. Web material from inside the box **262** may then be led out through the space **274** and laid over the cutter rail **278**.

[0078] Referring now to FIGS. 19 and 20, a further form of container **290** comprises a box **292** with adjacent sides **294**, **296**. The box sides **294**, **296** do not meet. A cutter rail **298** occupies the corner between the box sides **294**, **296**. The cutter rail **298** comprises a generally tubular guide **300**. Part of the guide **300** is preferably of rectangular section, with two flat faces **302**, **304** forming a corner **306** of the box **292**. The flat faces **302**, **304** are extended as outer flanges **308**, **310** overlying the box sides **294**, **296** on the outside of the box **292**. A slot **312** extending along the length of the tubular guide **300** opens through one of the flat faces **302**. Inner flanges **314**, **316** extend from the tubular guide **300** overlying the box sides **294**, **296** on the inside of the box **292**. Free edges of the box sides **294**, **296** are inserted between the outer and inner flanges **308**, **314** and **310**, **316** as shown by the arrows in FIG. 19, and secured by adhesive. Alternatively, the box sides **294**, **296** may be interference fits between the outer and inner flanges **308**, **314** and **310**, **316**.

[0079] A cutter **320** comprises a foot **322** that is captive in the tubular guide **300**, a neck **324** that in an operating position of the cutter assembly as shown in FIG. 20 extends through the slot **312**, and a handle or head **326** that in the operating position overlies the flat face **302** of the rail **298**. The foot **322** is roughly cylindrical, so that it can rotate about the longitudinal axis of the tubular guide **300** as explained below. A cutter blade is provided on the neck **324** for cutting web material **30** laid over the rail **298**. Near one end of the rail **298**, a cutout **328** is provided in the box side **326**, in the flat face **304** of the rail **298**, in the part of the flat face **302** between the corner **306** and the slot **312**, and in the side of the tubular guide **300** facing the flat face **304**. As shown in FIGS. 19 and 20, the cutout **328** is as long in the lengthwise direction of the rail **298** as is the head **326** of the cutter **320**. The foot **322** of the cutter **320** is longer than the cutout **328**.

[0080] When the cutter **320** is slid to a position level with the cutout **328**, the cutter can be rotated about the longitudinal axis of the tubular guide **300**, with the head and neck of the cutter swinging sideways into the cutout **328**. The cutter **320** can rotate into a non-use position, as shown in FIG. 19, in which the neck **324** and head **326** are approximately on the opposite side of the tubular guide **300** from the slot **312**. The cutout **328** does not extend round the back of the tubular guide **300**, and the non-use position of the cutter **320** is determined by the neck **324** of the cutter abutting the back of the cutout in the tubular guide. The width of the head **326** of the cutter **320** is selected so that in the non-use position the head is approximately flush with or slightly recessed behind the outer surface of the box side **296**, but is not behind the inner flange **316**. The inner flange **316** then prevents

the cutter **320** from moving axially out of alignment with the cutout **328** when the cutter is in the non-use position. Alternatively, the part of the cutout **328** in the tubular guide **300** within which the neck **324** of the cutter **320** rests in the nonuse position may be only as long as the neck **324**, or another baffle may be provided to prevent the cutter moving axially behind the box side **296** in the non-use position. The part of the cutout **328** in the box side **296** extends away from the corner **306** further than the head **326** of the cutter **320**, enabling a user's finger to be inserted.

[0081] For shipping and storage, the cutter **320** is placed in the non-use position within the cutout **328**. The container **290** then has a substantially rectangular profile, with the faces **302**, **304** of the rail **298** projecting only slightly above the box sides **294**, **296**. The slot **312** and the cutout **328** may be covered by a lid, wrapping, or other cover as discussed above. To use the container **290**, the user removes any cover, inserts a finger into the cutout **328**, and swings the head **326** of the cutter **320** out in the direction of the arrow **330** in FIG. 19 into the operating position shown in FIG. 20, in which the cutter can be slid along the slot **312**. Web material is then led out of the interior of the box **292** through a slot (not shown in FIGS. 19 and 20) and laid on the flat face **302** across the rail slot **312**. A desired length of web material is then cut off by sliding the cutter along the rail **298** as described above. For subsequent storage, the cutter **320** may be either returned to the non-use position or left in the operating position at one end of the rail slot **312**.

[0082] Referring now to FIGS. 21 and 22, a further form of container indicated generally by the reference numeral **340** comprises a box **342**, one side **344** of which has, in a non-use condition as shown in FIG. 21, a recessed channel **346**. The channel **346** is generally rectangular in section, with two side walls **348** and a bottom wall **350**. A cutter rail **352** is mounted on the bottom wall **350** of the channel **346**. Each of the side walls **348** has a trap-ezoidal fluted section **354** formed by a mid-facet **356**, generally parallel to but offset from the main plane of the side wall **348**, and two oblique facets **358** joining the edges of the mid-facet **356** to facets **360** of the side wall in the main plane on either side of the fluted section. The angles between the various facets are creased sharply enough that under an applied force the side walls **348** tend to flex at the creases without crumpling or bending the facets. The cutter rail **352** is mounted on the mid facet **362** of a fluted section **364** formed in the bottom wall **350**.

[0083] In the non-use condition shown in FIG. 21, for shipping, storage, and display, the channel **346** is inside the outline of the box as defined in part by the plane of the box wall **344**, and all of the fluted sections **354**, **364** project into the interior of the channel **346**. As may be seen from FIG. 21, the underside of the flute **364** renders the bottom wall **350** of the channel **346** concave towards the middle of the box **342**, increasing the space available for a core **32** of web material **30** in the box **342**. The channel **346** is covered by a strip of material **366** that is

bonded to the box side **344** on either side of the channel with peelable adhesive. The container **340** is thus substantially rectangular in shape.

[0084] For use, the user removes the covering strip **366**, reaches into the channel **346**, grasps the cutter rail **352**, and pulls. Alternatively, if the box **342** can be opened, the user may push from the other side of the bottom wall **350**. The flexibility provided by the fluted sections **354** allows the entire channel **346** to be inverted so that the channel projects outward from the box wall **344**, with the cutter rail **352** on top of the channel. As shown in FIG. 22, the flute **364** is separately inverted, so that the flute **364** is concave outward, with the cutter rail **352** in the concavity. The upper surfaces **353** of the cutter rail **352** are then closer to the plane of the outer facets **368** of the channel bottom wall **350**, allowing web material **30** to be laid smoothly over the channel bottom wall and the cutter rail for cutting. The bottom wall **350** of the channel **346** defines a slot **28** through which the web material **30** is led out from the container.

[0085] As illustrated in FIGS. 21 and 22, there is a number of surface elements designed to create flexibility in the channel **346**. Other configurations are contemplated to create this function for the wall construction, such as accordion style bellows, etc.

[0086] Referring now to FIGS. 23 and 24, a further form of container indicated generally by the reference numeral **370** comprises a box **372**, one side **374** of which has, in a non-use condition as shown in FIG. 23, a recessed channel **376**. The channel **376** is generally triangular in section, with two side walls **378**, **380**. A cutter rail **382** is mounted on one of the side walls **380** of the channel **376**. The cutter rail is positioned and dimensioned so that it does not project above the plane of the box side **374**.

[0087] In the non-use condition shown in FIG. 23, for shipping, storage, and display, the channel **376** is covered by a strip of material **384** that is bonded to the box side **374** on either side of the channel with peelable adhesive. The container **370** is thus substantially rectangular in shape.

[0088] For use, the user peels off the cover strip **384**, and then inverts the channel **376** to the position shown in FIG. 24, projecting outward from the box side **374**, with the cutter rail **382** on the outside. Because of the triangular shape of the channel **376**, inverting the channel typically involves spreading the outer facets of the box side **374** apart, or bending one or more of the facets of the channel **376**. The required flexibility is taken into consideration in determining the materials and construction for the box **372**.

[0089] Referring now to FIGS. 25 and 26, a further form of container **390** is generally similar to the container **370** shown in FIGS. 23 and 24. Reference is made to the description of FIGS. 23 and 24, which will not be unnecessarily repeated. Like reference numerals are used for like elements in both forms of container **370** and **390**. However, the cutter rail **382** shown in FIGS. 23 and 24 is generally rectangular in cross section, so that the distal

surface on which the web material is laid for cutting is parallel to the box facet **380** to which the rail is attached. As may be seen from FIG. 24, this may result in the cutter being positioned in use at an angle that is awkward for the user, or does not assist laying the web material smoothly over the cutter rail **382** for cutting. In FIGS. 25 and 26, the cutter rail **392** is wedge-shaped in cross section, so that in the operating position shown in FIG. 26 the cutting surface **394** of the cutter rail is roughly parallel to the plane of the box side **374**.

[0090] In FIGS. 23 through 26, the channel **374** is shown with sides **378**, **380** of different lengths, and thus at different angles to the plane of the box side **374**. The cutter rail **382** in FIGS. 23 and 24 is shown mounted on the shorter, steeper, channel side **380**. The cutter rail **392** in FIGS. 25 and 26 is shown mounted on the longer, more gently sloped, channel side **378**.

[0091] Either cutter rail may be mounted on either slope, with appropriate adjustment to the shape of the cutter rail **392** for the angle of the slope on which it is mounted, and with appropriate selection of the position of the cutter rail so as not to project through the cover strip **384** in the non-use condition.

[0092] Referring now to FIG. 27, a further form of container, indicated generally by the reference numeral **400**, comprises a box **402** with a cutter assembly, comprising a cutter rail **404** and a cutter **406**, at a corner between adjacent sides **408**, **410**. The cutter rail **404** has outer flanges **412** and inner flanges **414** holding between them free edges of the box sides **408**, **410**. The cutter rail **404** may be fastened to the box edges by adhesive, or may be an interference fit. The cutter rail **404** has an angled corner **416**, in which is a slot **418** in which the cutter **406** runs. The cutter has a head **420** projecting from the rail slot **418**. The head **420** is dimensioned so that it does not project beyond the imaginary continuations of the outer surfaces of the box sides **408**, **410**. The container **400** has a lid **422** that covers the box side **408**, including a slot **28** for web material **30**. The lid **422** has skirts **424** that extend down over the cutter rail **404**. The lid may be of transparent material so that, when the container **400** is displayed in a store, the cutter assembly **404**, **406** and printed material on the box side **408** are visible to potential purchasers.

[0093] Referring now to FIG. 28, a further form of container, indicated generally by the reference numeral **430**, comprises a triangular box **432** with a cutter assembly, comprising a cutter rail **434** and a cutter **436**, at a corner between adjacent sides **438**, **440**. The cutter rail **434** has outer flanges **442** and inner flanges **444** holding between them free edges of the box sides **438**, **440**. The cutter rail **434** may be fastened to the box edges by adhesive, or may be an interference fit. The cutter rail **434** has an angled corner **446**, in which is a slot **448** in which the cutter **436** runs. The cutter has a head **450** projecting from the rail slot **448**. The head **450** is dimensioned so that it does not project beyond the imaginary continuations of the outer surfaces of the box sides **438**, **440**. If

the box **432** has rounded corners, the cutter head **450** may be dimensioned so that it does not project beyond the curve of the rounded corner. The container **430** has a cover **452** that fits over the cutter assembly **434**, **436** and is fastened to the box sides **438**, **440** by adhesive tape **454**. The cover **452** has a rounded corner **456** that matches the curvature of the other corners of the box **432**. The cover **452** may be of transparent material so that, when the container **430** is displayed in a store, the cutter assembly **434**, **436** is visible to potential purchasers. A slot **28** for the web material is provided in the side wall **440** adjacent the cutter assembly.

[0094] Referring now to FIG. 29, a further form of container, indicated generally by the reference numeral **460**, comprises a box **462** with adjacent sides **464**, **466**. A cutter assembly comprising a cutter rail **468** and a cutter **470** is mounted in the corner between the adjacent sides **464**, **466**. The cutter rail **468** has outer flanges **472** and inner flanges **474** that receive between them the free edges of the adjacent sides **464**, **466**. The cutter rail **468** comprises a recess **476**, within which are a cutter guide **478** and the cutter **470**. The cutter guide **478** has a surface **480** with a slot **481** in the surface. A neck **482** of the cutter **470**, carrying a cutter blade **484**, projects from the rail slot **481** to cut web material **30** that is laid across the surface **480**. A slot **486** is formed in the extension of the rail **468**, between the cutter guide **478** and the flanges **472**, **474** that receive the box side **464**. The slot **486** is positioned so that web material **30** can be led from inside the box **462** out of the slot **486** and across the surface **480** of the cutter guide **478**. At one side of the cutter rail **468**, the outer flange **472** is offset outwards from an adjacent part of the cutter rail, forming a step **488**. An edge of a lid or cover **490** seats in the step **488**. A similar step may be formed at the other side of the cutter rail, and the cover **490** seated in both steps. Alternatively, the other side of the cover **490** may be attached to the box **462** in another way.

[0095] Referring to FIGS. 30-32, a further form of container **510** is illustrated comprising a box **512** having a generally elongated rectangular configuration with a central recess **536** in the top surface **516**. The recess **536** is defined by two angled strips **538**, **540** and a trough **539**; the trough **539** has one or more slots **528** therein. The box **512** contains two separate rolls **532A**, **532B** of web material **530A**, **530B**. It is contemplated that the two rolls will be distinct materials, such as, e.g., plastic wrap and aluminum foil. As illustrated in FIG. 31, two separate cutter assemblies **560A**, **560B** are provided within the recess **536** in the box top **516**. The distinct web materials **530A**, **530B** extend out of the slot **528** and across a corresponding cutter **560A**, **560B**.

[0096] Each cutter assembly **560A**, **560B** as illustrated is in the form shown in FIG. 32. The rail portion **562** includes a base **564**, two angled side portions **566** and a top **568**, defining a slot **570**. A sliding cutter **572** is provided and includes a flat portion **574**, a neck portion **576** supporting one or more cutter blades, and an actuation

head **578**, similar to those items found in the cutter assemblies of the above discussed embodiments.

[0097] The form of the central recess as illustrated includes angled walls. However, the recess may include 90° walls, such as that contemplated by the embodiment of FIG. 1. A corresponding adjustment of the cutter assembly may be desired, incorporating, e.g., the rail profiles of FIGS. 3-5. Adjustment of the form of the box to create the varying forms for the recess are contemplated to be within the skill of the art.

[0098] One reason for the provision of the two cutter assemblies relates to the two distinct material rolls. If, e.g., a plastic or cling wrap is provided on roll **532A**, certain cling, static cling or tack construction may be desirable on the edges of the track to hold the material in place during cutting. However, if aluminum foil, e.g., is provided on the alternate roll **532B**, the rail properties may be required to be different or a different cutter assembly may be desirable.

[0099] Further variations of the container **510** may be desired to meet the needs of the user. One example is the provision of a flap or cover that protects the cutter assemblies as is discussed above.

[0100] Referring now to FIGS. 33 and 34, a further form of container **610** is shown in cross section. The container comprises a box **612** having end walls **614** (only the far end wall shown in FIG. 33), a front wall **616**, a bottom wall **618**, a back wall **620** and a lid **622**. Each of the walls is positioned orthogonal to an adjacent wall and together generally define an interior space. The lid portion **622** comprises a top wall **624**, a flap **626** and a tab **628**. Web material **630** is preferably stored in a roll **632** and positioned within the inside space defined by the walls of the box **612**. The lid **622** is hingedly secured to the top edge of the back wall **620**. When the lid **622** is closed, the top wall **624** covers the upper portions of the box **612** between the back wall **620** and the front wall **616**. The flap **626** overlies the front wall **616**, with the tab **628** overlying a lower part of the front wall.

[0101] A cutter rail **636** extends substantially the length of the box **612**. As shown in FIG. 34, the cutter rail **636** comprises a rail portion in the form of a channel **638** of generally rectangular cross section. The rail channel includes a base **640**, two side walls **642** and a top **644**, defining a slot **646**. A sliding cutter **648** (see FIG. 33) is provided inside the channel **638** and includes a foot **650** (captive inside the channel **638**), a neck portion **652** supporting one or more cutter blades and extending through the slot **646**, and an actuation head **654**. The sliding cutter is contemplated to be similar in form to those cutter assemblies discussed above.

[0102] Two fins **656** project from the base **640** of the rail portion **638**, opposite the slot **646**. The fins **656** may extend the length of the rail **638**, or may be shorter at the ends. The fins **656** may also have gaps along the length of the rail. The fins are parallel to one another and are spaced to define a gap **658**. As illustrated, ribs **660** project from the fins **656** into the gap **658**. The ribs **660** extend

along the length of the fins and are preferably triangular in cross-section. The ribs **660** may have any asymmetrically shape and their projecting tips **662** preferably are angled towards the upper portion of the rail. As shown in FIG. 34, there are several ribs **660** on each of the fins **656**, and the ribs alternate within the gap **658**. The width of the gap **658** and the dimension and stiffness of the ribs **660** are chosen, in relation to the thickness and material of the front wall **616** of the box **612**, so that the front wall **616** can be pushed into the gap **658** without requiring a force that might crumple the box material, but which form a restriction to removal. Preferably, the tips of the ribs **660** deflect, and/or the material of the front wall **616** compresses or bends slightly, to permit the passage of the front wall into the gap **658**. However, if a force is applied tending to withdraw the rail **636**, the ribs **660** act as barbs, to grip the front wall and resist removal. If the box **612** is made of paperboard, cardboard or similarly semi-flexible (or compressible) material, the ribs **660** may bite into the surface of the box material. Alternatively, an adhesive may be provided or some other securing method.

[0103] As shown in FIG. 33, the lip on the front wall **616** of the box **612** defines is relatively lower than the upper edge of the rear wall **620** and/or the end walls **614**, so that when the front wall **616** is fully pushed into the gap **658** between the fins **656**, the top of the actuation head **654** of the sliding cutter **648** is just below the top edges of the box ends **614**. In this position, the box ends **614** may act as end stops, preventing the sliding cutter **648** from sliding out of the ends of the channel **638** of the cutter rail **636**. The top **624** of the lid **622** is made slightly longer than the box ends **614**, so that with the lid closed the flap **626** folds down in front of the cutter rail **636**.

[0104] To assemble the container **610**, the box **612** is formed and the roll **632** of web material **630** is placed in the box. The sliding cutter **648** is inserted in the rail portion **638** from one end, and the cutter rail **636** is pushed onto the box front wall **616**. The lid **622** is closed over the cutter rail **636**, and the tab **628** is secured to the lower part of the front wall **616**, for example, by adhesive. The combination, thus, forms a compact sealed package, suitable for storage, shipping and display.

[0105] To open the container **610**, the user may separate the flap **626** from the tab **628**, or separate the tab **628** from the front wall **616**. The separation may be irreversible, so that the container **610** can be re-closed loosely, but it is clear that the container has been opened and re-closed.

[0106] In use, the sheet material **630** is led off the roll **632** across the top surface **644** of the cutter rail **636**, where it can be cut by the sliding cutter **648**. Because the cutter rail **636** is centered over the box front wall **616**, there is little tendency for the cutter rail **636** to tilt sideways and bend the box wall **616** if the user applies excess pressure to the cutter rail **636** or to the sliding cutter **648**. The cutter rail **636** preferably overhangs the interior of the box **612** only slightly. Thus, the actuation head **654**

does not overhang beyond the side walls **642** of the rail portion **638** and there is little risk of the roll **632** becoming entangled with the cutter assembly if the roll shifts out of position within the box.

[0107] The box portions of each embodiment discussed above may be made of paper, paperboard, cardboard, or the like. The boxes alternatively can be made from another substantially rigid material, such as, for example, plastic. The box could be made from two plies of 12 point or thinner material. It is contemplated that a thicker box construction would be more expensive to manufacture but would allow for the container to be reusable, whereas a thinner box construction would be less expensive to manufacture but would be more suitable for merely a one-time-use (or disposable) container. A reusable container may require more durable cutter blades than a disposable container. A metal cutter blade may be used, especially for a reusable container. A plastic blade may be more suitable for a disposable container.

[0108] Although elongate square and triangular dispensers have been described, the dispenser may be of any shape, provided that is capable of accepting a hollow core of web material and has surfaces and/or corners on which the slot for the web material and the rail and cutter assembly can be arranged. Thus, at a minimum, the dispenser must include a space capable of housing the web material. The dispenser may be circular in cross section. The dispenser can also be semi-cylindrical, rectangular, oval or some other geometrical or non-geometrical shape. As is shown for the triangular dispenser 110 in FIG. 6, terms such as "square" and "triangular" are not limited to the strict geometric shape, but include approximations thereto, whether arising from manufacturing tolerances and imprecision or from deliberate design choices such as the rounded corners shown in FIG. 6. The web of material could be in some form other than a roll. For example, the web of material may be folded back and forth on itself. If the web of material is in a form other than a roll, then the shape of the dispenser is not constrained to shapes that can efficiently contain a roll.

[0109] Various forms of slot have been described. In many cases, one form of slot may be substituted for another form, or a slot formed in the box of the container may be exchanged with a slot formed in the cutter rail, especially in those forms of cutter rail that extend from the actual cutter guide to engage a box side that is not continuous behind the cutter rail. The choice of slot may depend on whether it will be covered by a lid, cap, wrapper or the like. A slot that is closed until the container is brought into use as a dispenser, and is then opened, for example, by raising a flap or tearing out a strip, may be appropriate if the slot is not covered. In those drawings where a slot not shown or particularly mentioned, a suitable slot form is contemplated and may take the form of any of the other embodiments.

[0110] If the container is intended to be reusable, a lid or flap that can be opened and re-closed to insert a new supply of web material into the container may be desired.

In those embodiments where such a flap is not shown, a flap may be provided on a convenient part of the box, for example, on a side not shown in the partial sections such as FIG. 27. Where the container is intended to be disposable, a flap may still be provided, to provide access to the interior to assist in initially feeding the web material through the slot. Alternatively, the container may be shipped with the free end of the web material already extending out through the slot, and secured on the outside of the box, especially if that part of the outside of the box is covered by a lid, etc.

[0111] Various embodiments show a rail mounted in a recess in the box with the ends of the rail received under an overhang, etc. at the ends of the box. Other embodiments show the ends of the rail open. In embodiments where the rail in its in use position is within the outline of the box, the ends of the box without overhangs may alternatively extend above the surface on which the cutter rail is mounted, and may then act as end-stops to prevent the cutter sliding out of the end of the rail. Alternatively, or in addition, the ends of the cutter rail may be closed by caps, or by deforming the rail, to retain the cutter within the rail. Alternatively, one or both ends of the rail may be left open.

[0112] In the embodiments, strips of cling, static cling, or tacky material may be provided to steady the web material while the material is being cut, and/or to retain the end of the material until it is drawn forward to cut a next length. For thick webs, and/or for web materials that do not cling strongly to the cling strips or other retentive materials, an entire side of the box may be coated with cling or other retentive material. The strip of the surface over which the underside of the cutter head actually passes may be left uncoated.

[0113] In the embodiments, the cutter rail is shown as a channel of C-shaped cross section, with a lengthwise slot, and with the web material being cut resting on the exterior surfaces either side of the slot. The corresponding cutter has a foot captive inside the channel, a neck carrying the actual cutter blade passing through the slot, and a head outside the channel that is grasped by the user. However, other configurations of cutter rail and cutter may be used.

[0114] Many modifications and other embodiments of the inventions set forth herein will come to mind to one skilled in the art to which these inventions pertain having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the inventions are not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

Claims

1. A dispenser for containing a supply of flexible web material and for dispensing a portion of the web material and severing the portion from the remaining web material in the dispenser, comprising:

a container formed by at least first, second, and third side walls serially connected to one another along longitudinal edges thereof that form corners of the container and a pair of opposite end walls connected to opposite end edges of the side walls;

an elongate opening defined in the container through which a portion of the web material can be dispensed;

one of the side walls including a fixed portion and a movable portion that is connected with the fixed portion and that is movable between a stowed position for shipping of the dispenser and an operative position for dispensing web material, the movable portion in the stowed position forming a recessed area that is inside an external geometric profile of the container;

a polymer track affixed to the movable portion and a cutter engaged with the track and slidable therealong for cutting a portion of web material dispensed through the elongate opening and laid across the track, the track and cutter being located inside the external geometric profile of the container when the movable portion is in the stowed position, and the track being positioned to have a portion of the web material laid across the track when the movable portion is in the operative position.

2. The dispenser of claim 1, wherein the movable portion is formed by first and second portions of the side wall that are hingedly connected to the fixed portion and to each other.

3. The dispenser of claim 1, wherein the movable portion is formed by first, second and third portions of the side wall, the first and third portions being respectively hingedly connected to opposite parts of the fixed portion and extending generally perpendicular to the fixed portion and parallel to each other, and the second portion being connected between distal ends of the first and third portions, the track being affixed to the second portion.

4. The dispenser of claim 3, wherein each of the first and third portions of the side wall includes a fluted section to facilitate moving the movable portion from the stowed position to the operative position.

5. A dispenser for containing a supply of flexible web material and for dispensing a portion of the web ma-

terial and severing the portion from the remaining web material in the dispenser, comprising:

a container formed by at least first, second, and third side walls serially connected to one another along longitudinal edges thereof that form corners of the container and a pair of opposite end walls connected to opposite end edges of the side walls;
 an elongate opening defined in the dispenser through which a portion of the web material can be dispensed;
 the first and second side walls being adjacent and having free edges that are proximate each other at one corner of the container;
 a polymer track affixed to the first and second side walls such that the track bridges between the free edges and substantially fixes the first and second side walls against relative movement therebetween, the track defining a cutter guide; and
 a cutter engaged with the cutter guide and slidable therealong for cutting a portion of web material dispensed through the elongate opening and laid across the track.

6. The dispenser of claim 5, wherein the track includes a pair of first flanges structured and arranged to receive the free edge of the first side wall therebetween, and a pair of second flanges structured and arranged to receive the free edge of the second side wall therebetween.
7. The dispenser of claim 6, wherein the first and second flanges are structured and arranged to form friction fits with the free edges of the first and second side walls, respectively.
8. The dispenser of claim 6, wherein adhesive bonds the first and second flanges to the first and second side walls, respectively.
9. The dispenser of claim 5, wherein the track defines an internal guide and the cutter includes a foot that resides in the guide and slides therein, wherein the track defines a slot leading out from the guide and the cutter includes a handle portion connected to the foot and projecting out through the slot for grasping to slide the cutter along the track, the track and cutter being structured and arranged such that the cutter is rotatable relative to the track between a shipping position and an operative position.
10. The dispenser of claim 9, wherein one of the first and second side walls defines a cutout adjacent the track for at least partially containing the handle portion of the cutter in the shipping position.

11. The dispenser of claim 5, wherein the first and second side walls are substantially perpendicular to each other, and the track extends between the free edges at an oblique angle to each of the first and second side walls such that the track and cutter are inside an exterior geometric profile of the container defined by the side walls.

12. The dispenser of claim 5, wherein the first and second side walls are substantially perpendicular to each other, and the track defines a recess and the cutter guide is disposed in the recess such that the cutter guide and cutter are inside an exterior geometric profile of the container defined by the side walls.

13. The dispenser of claim 12, wherein the elongate opening is defined in the track.

14. The dispenser of claim 12, further comprising a removable cover arranged to cover the track and cutter in a shipping configuration of the dispenser.

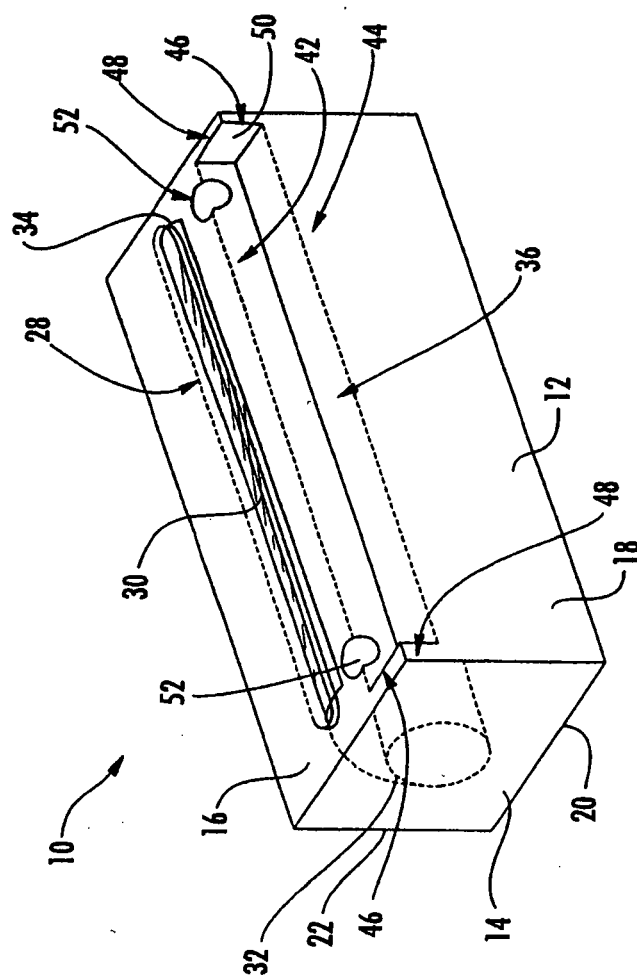
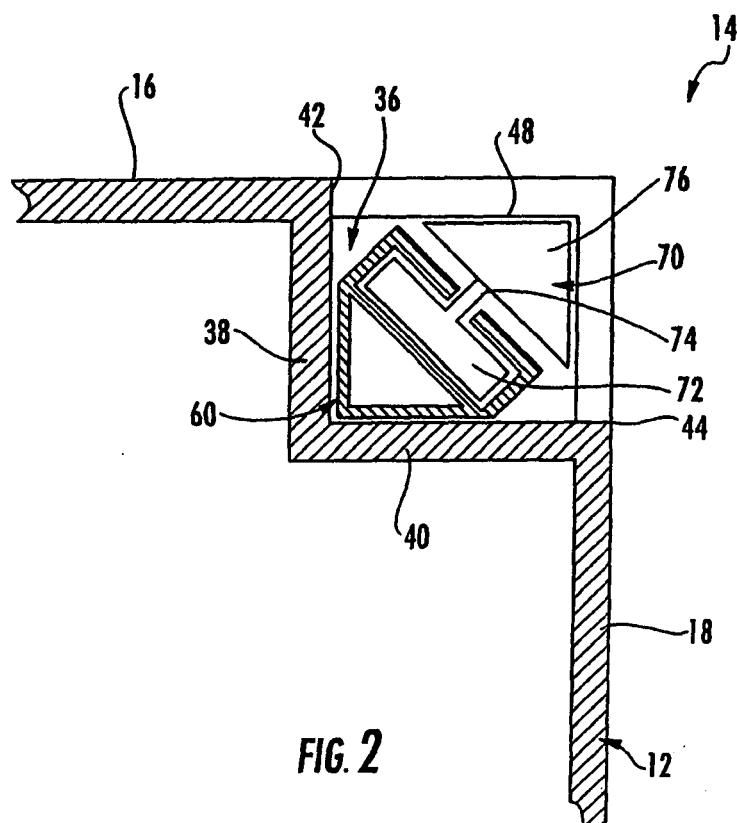


FIG. 1



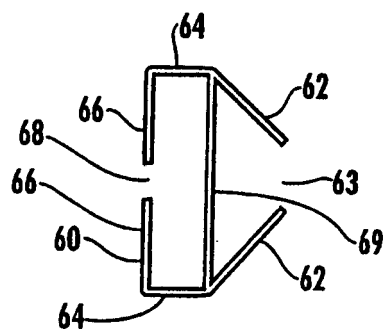


FIG. 3

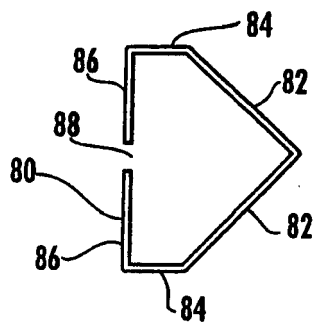


FIG. 4

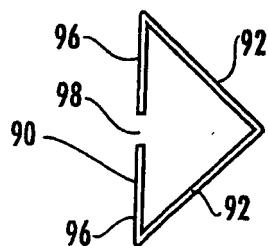


FIG. 5

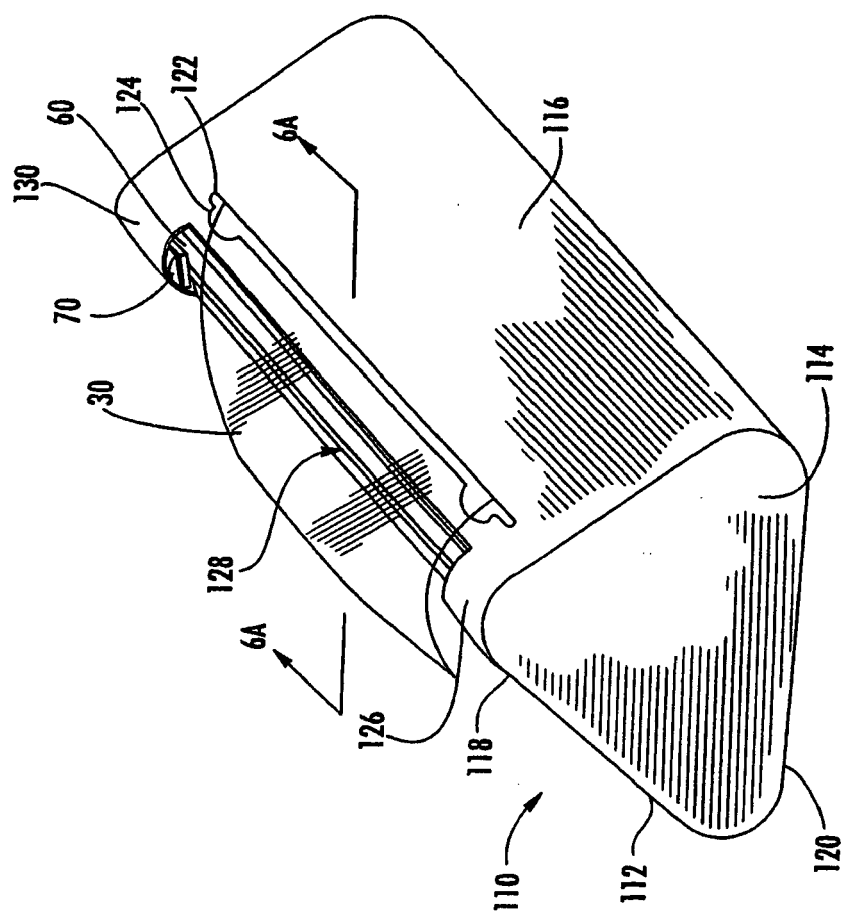


FIG. 6

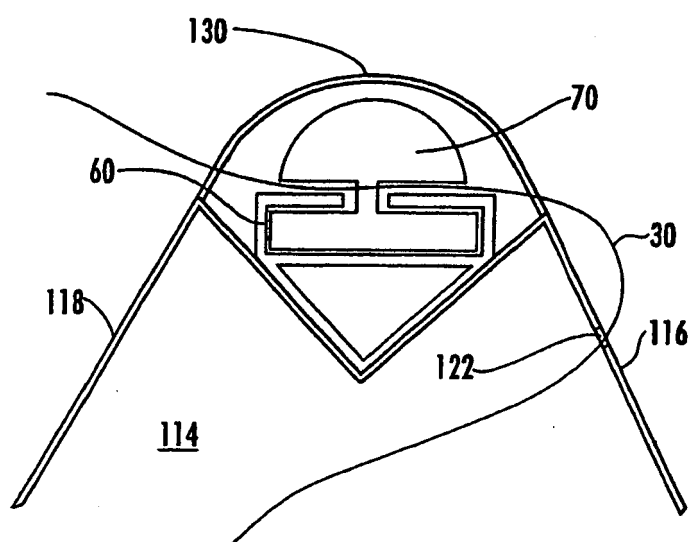
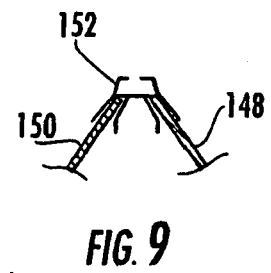
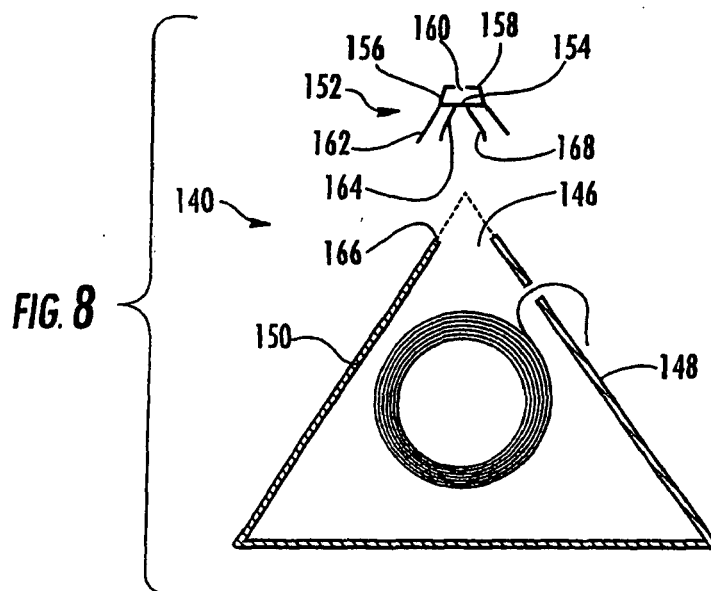
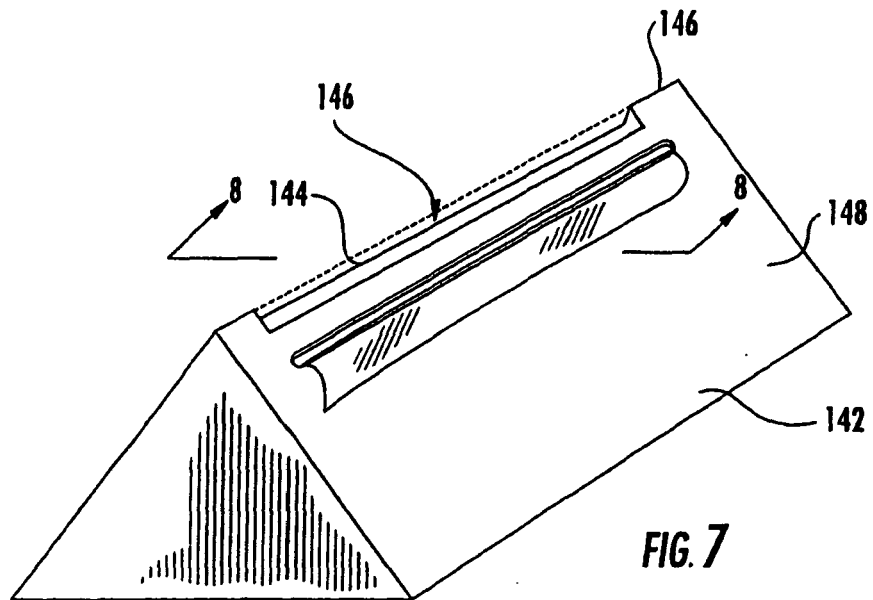


FIG. 6A



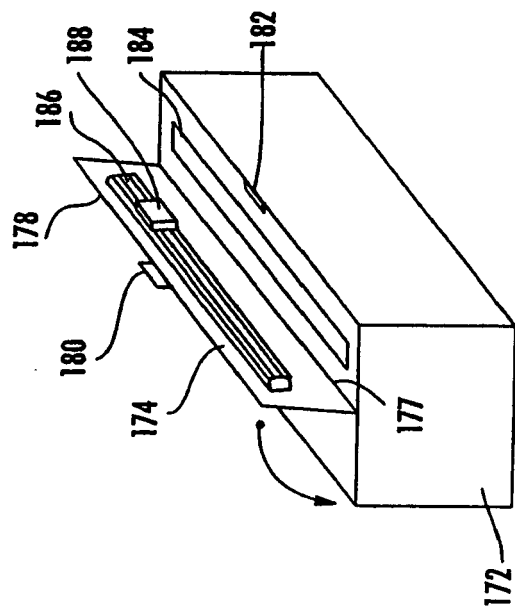


FIG. 11

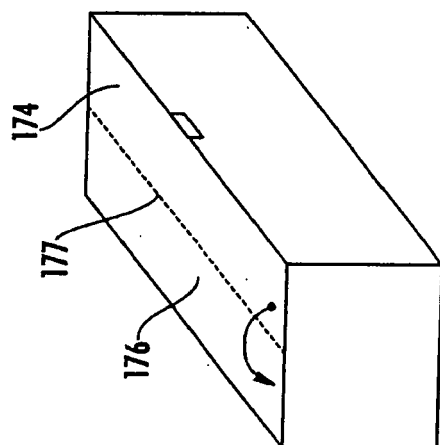


FIG. 10

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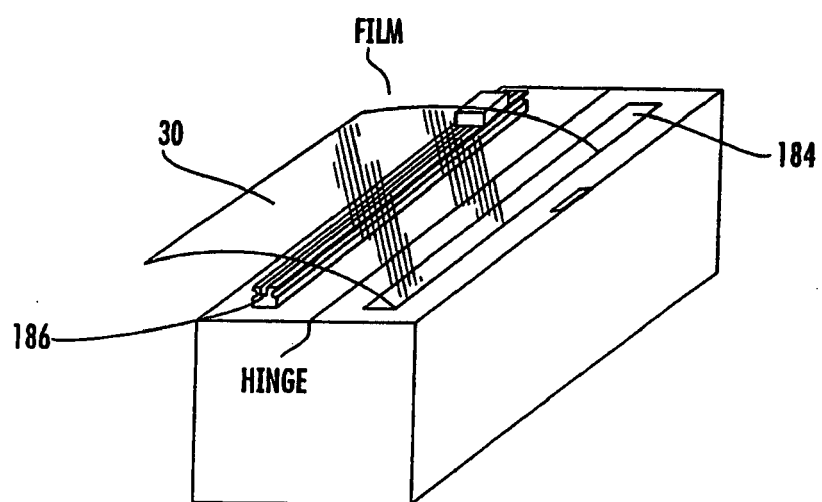


FIG. 12

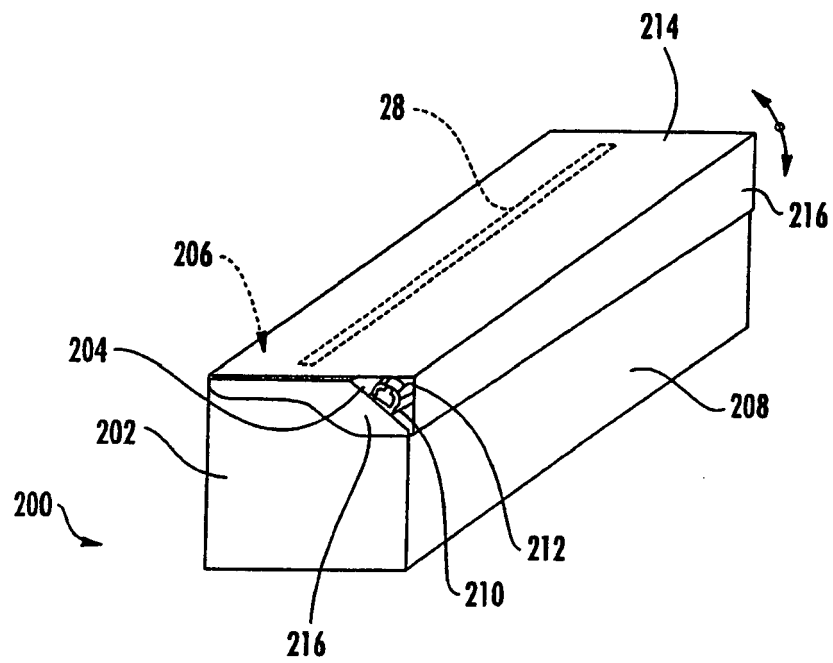
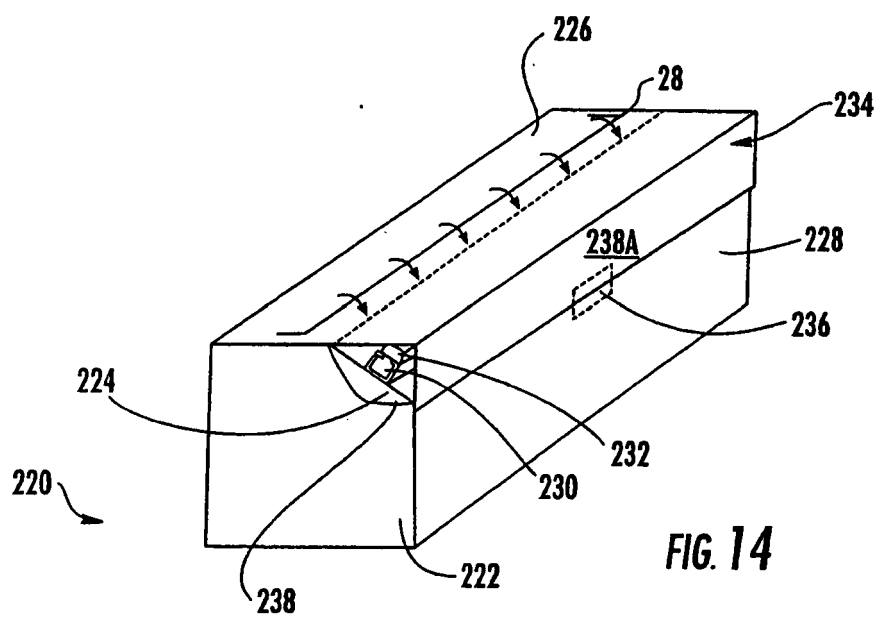
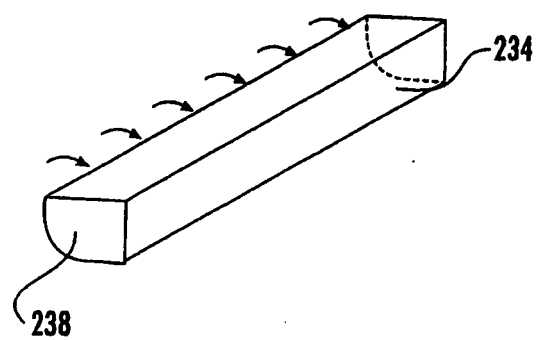


FIG. 13



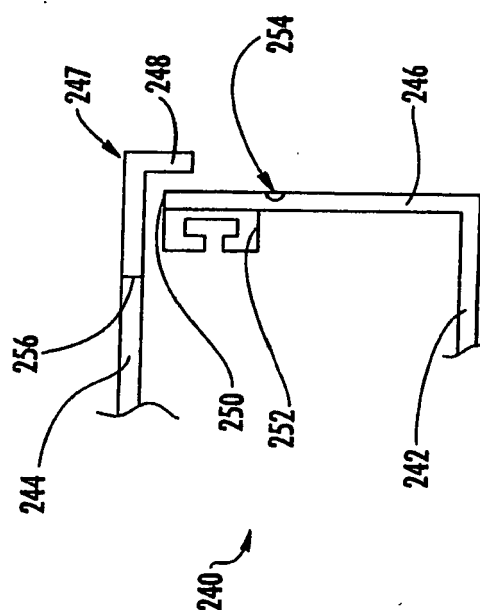
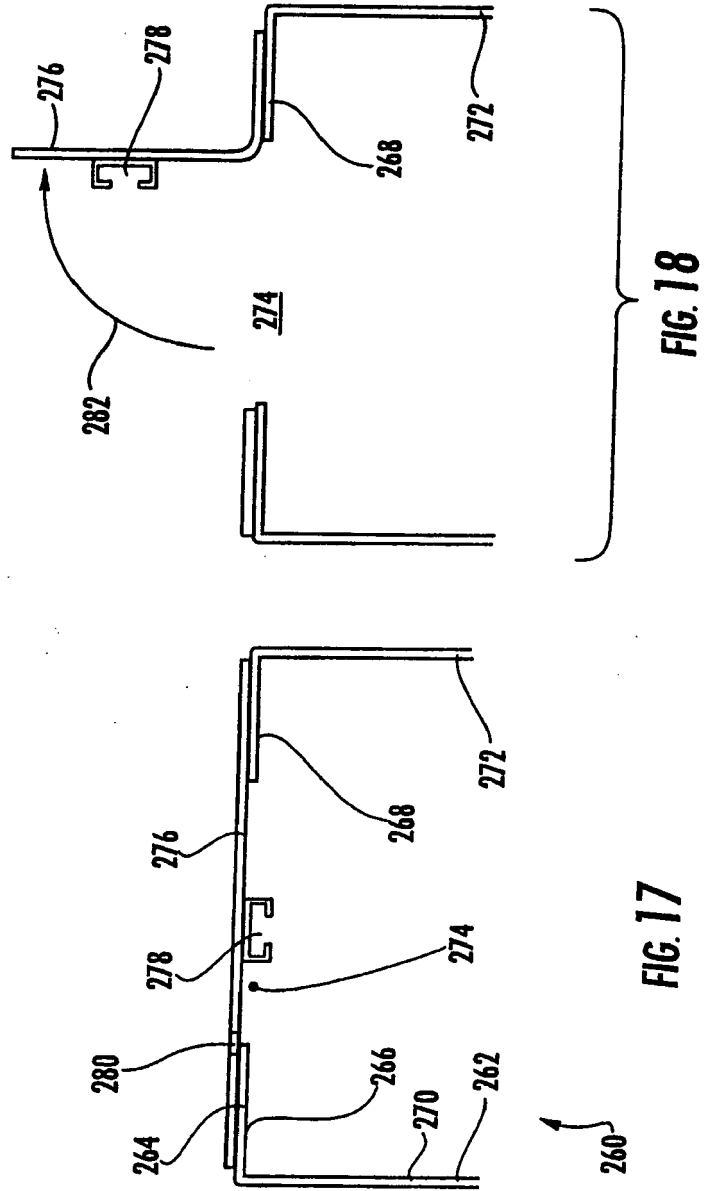


FIG. 16



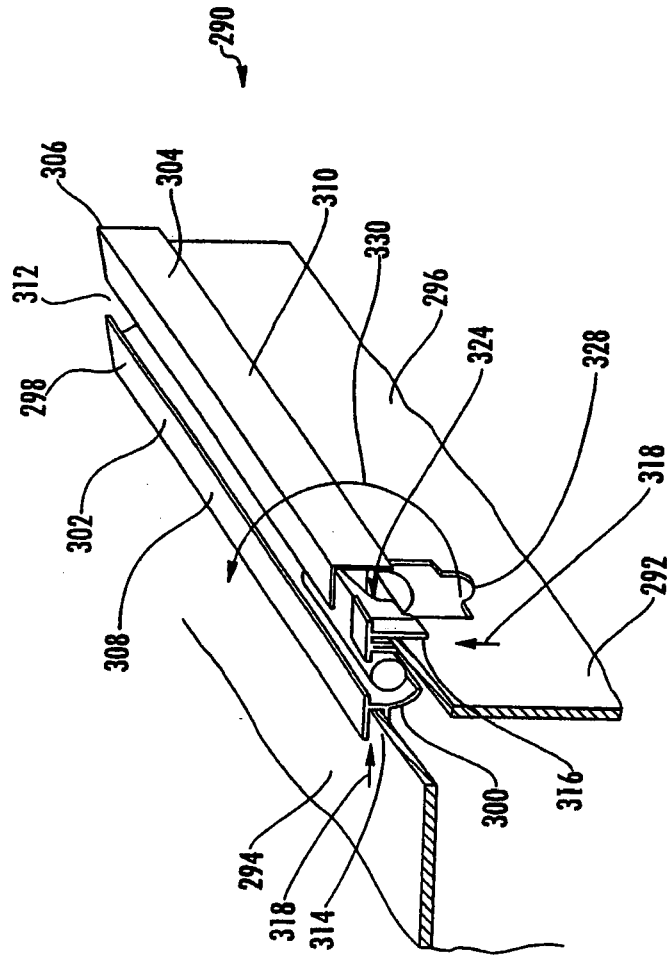
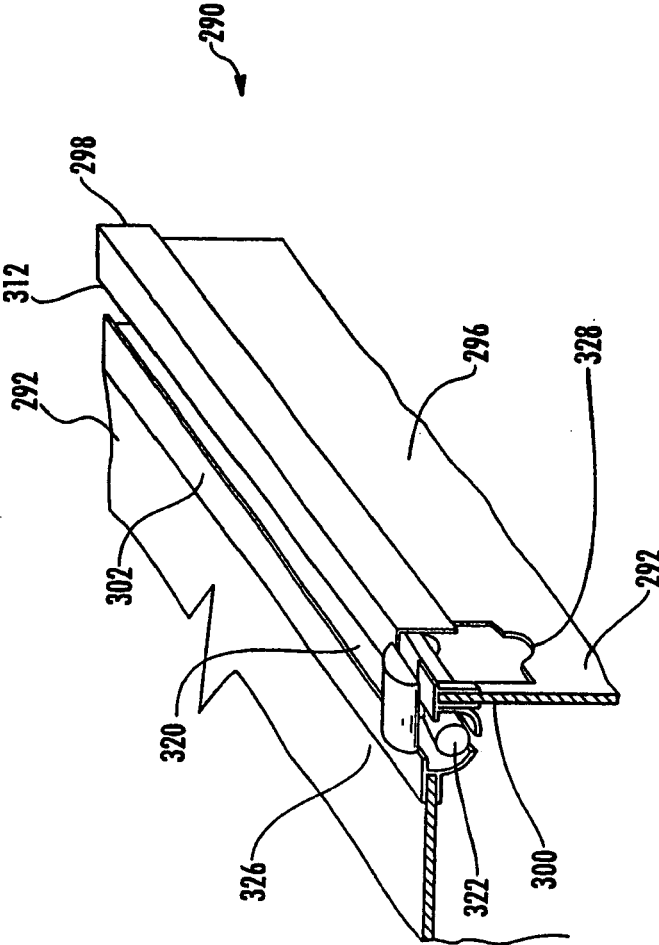


FIG. 19



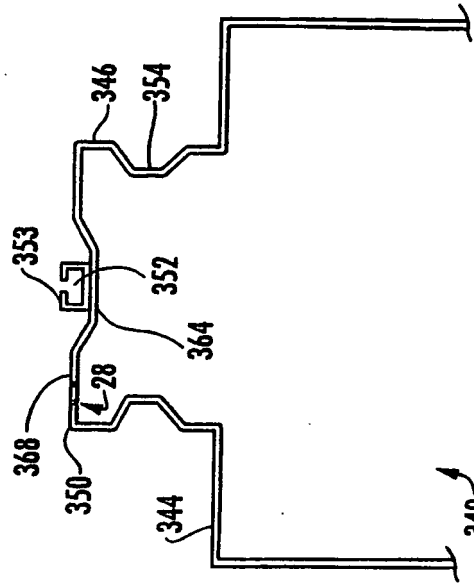


FIG. 22

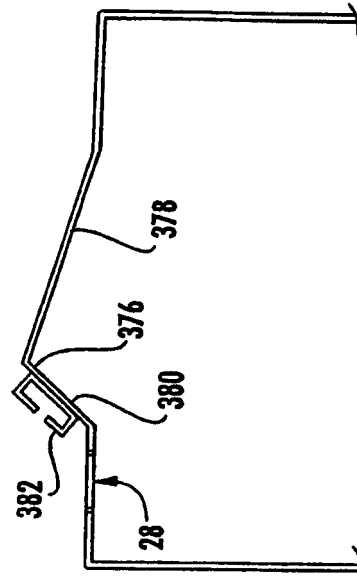


FIG. 24

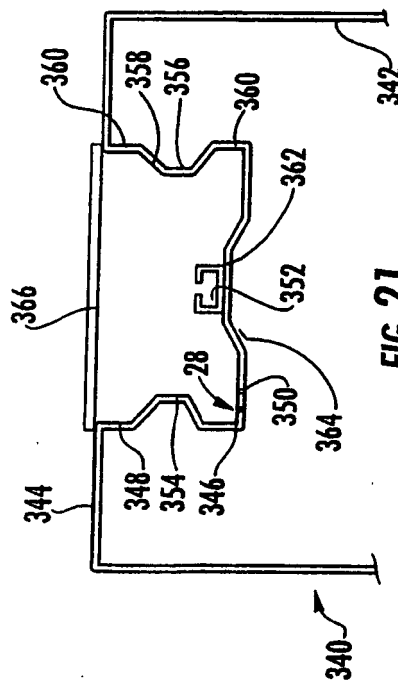


FIG. 21

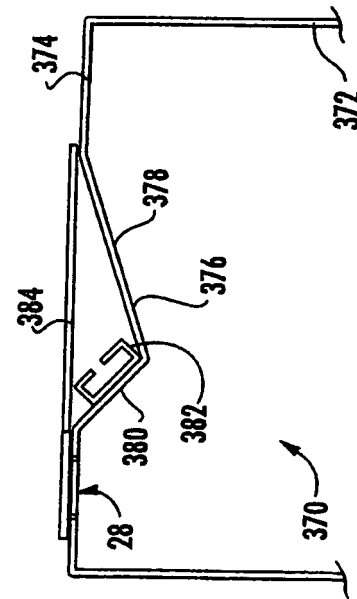


FIG. 23

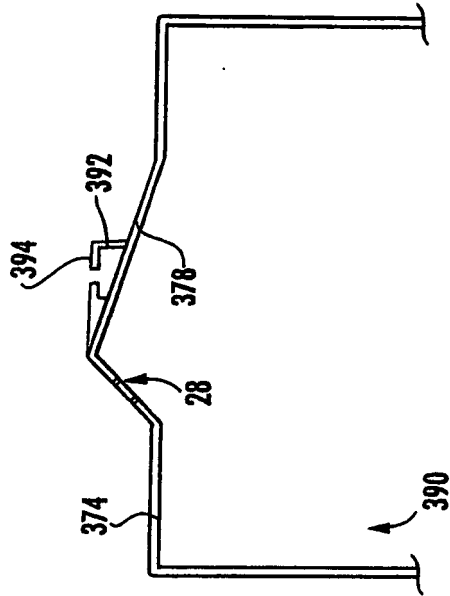


FIG. 25

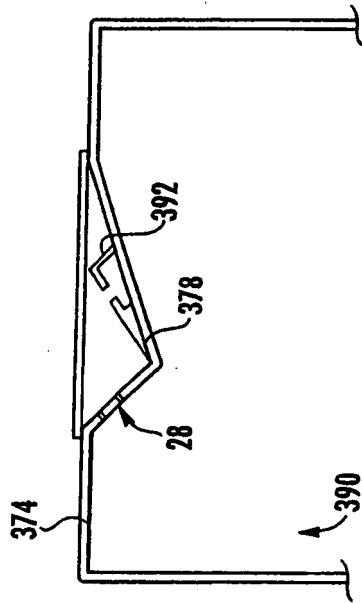
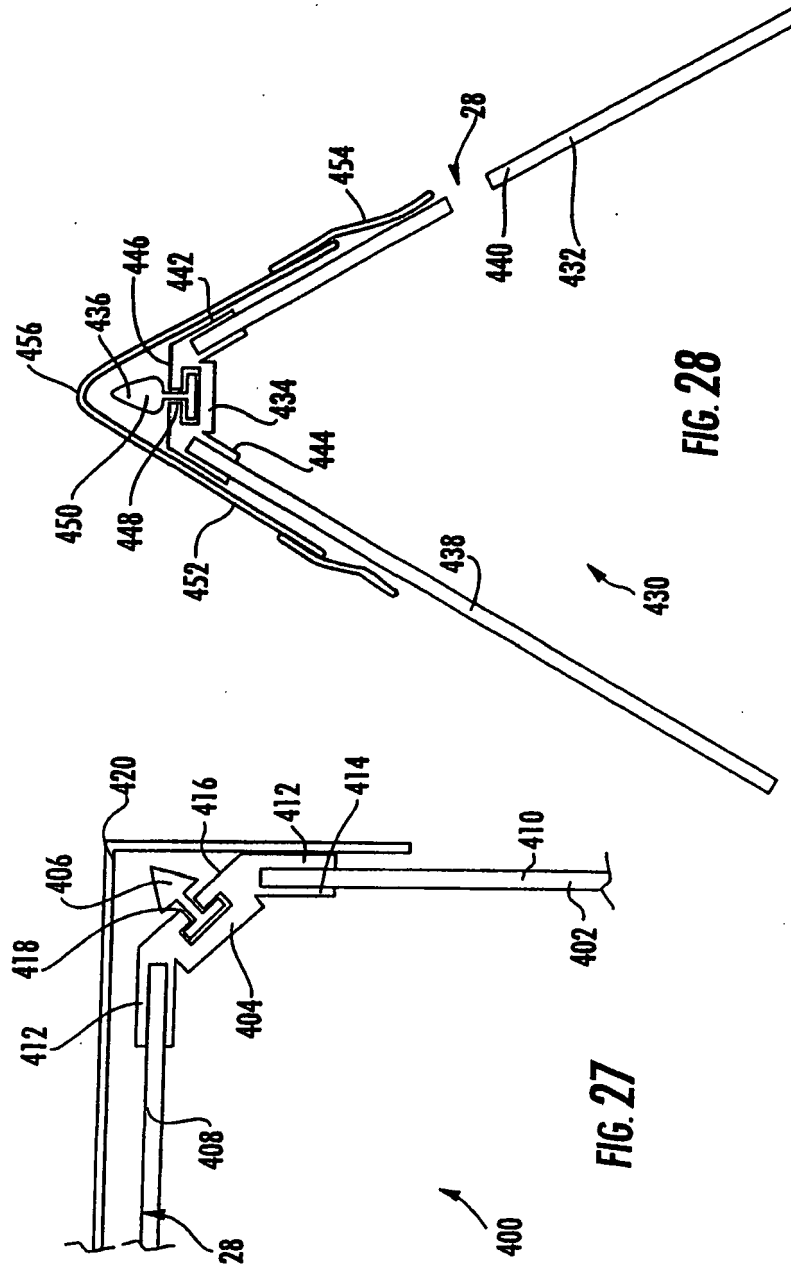
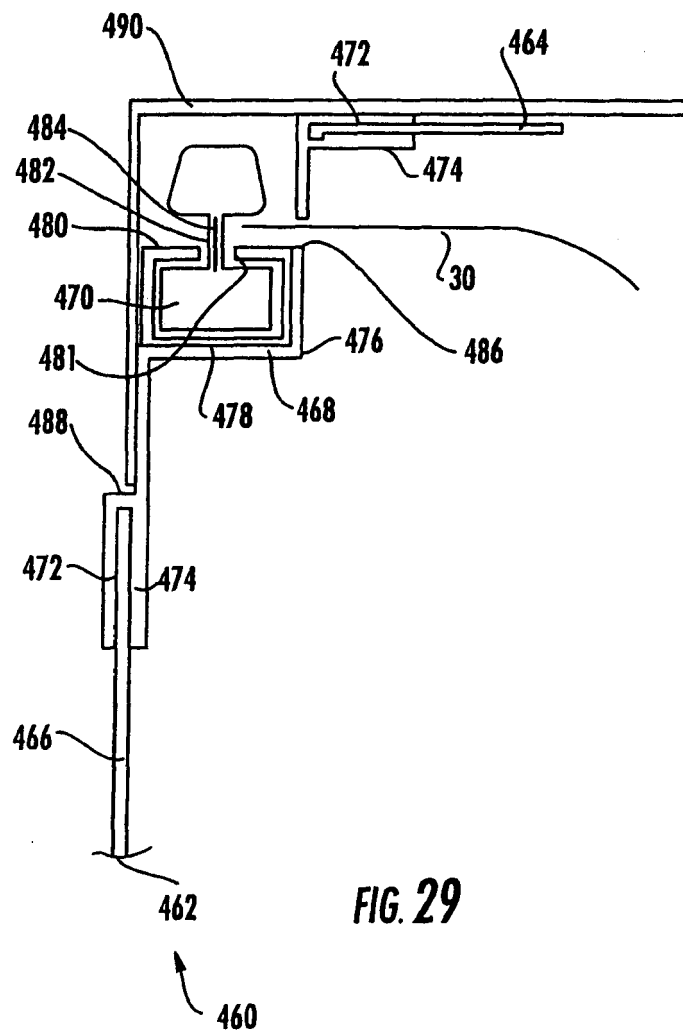
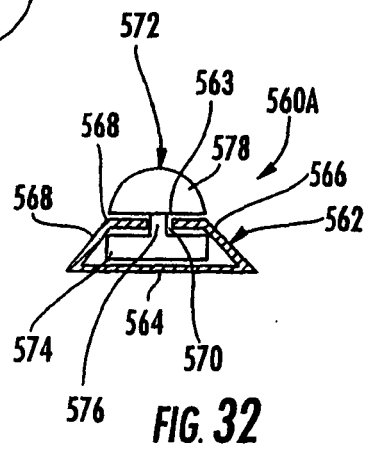
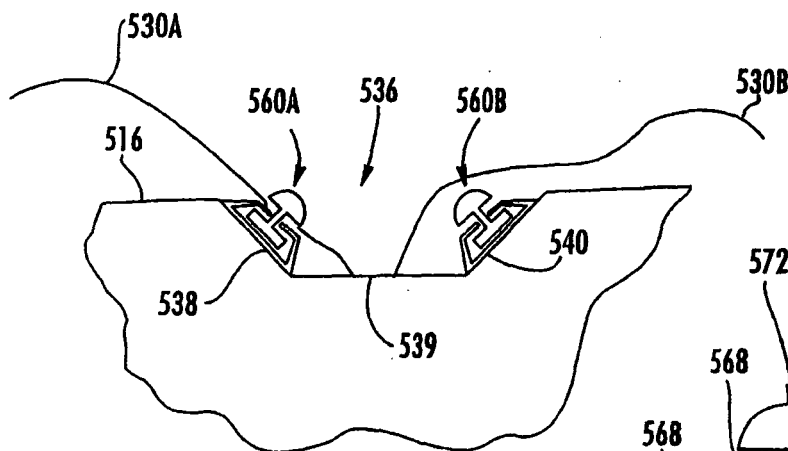
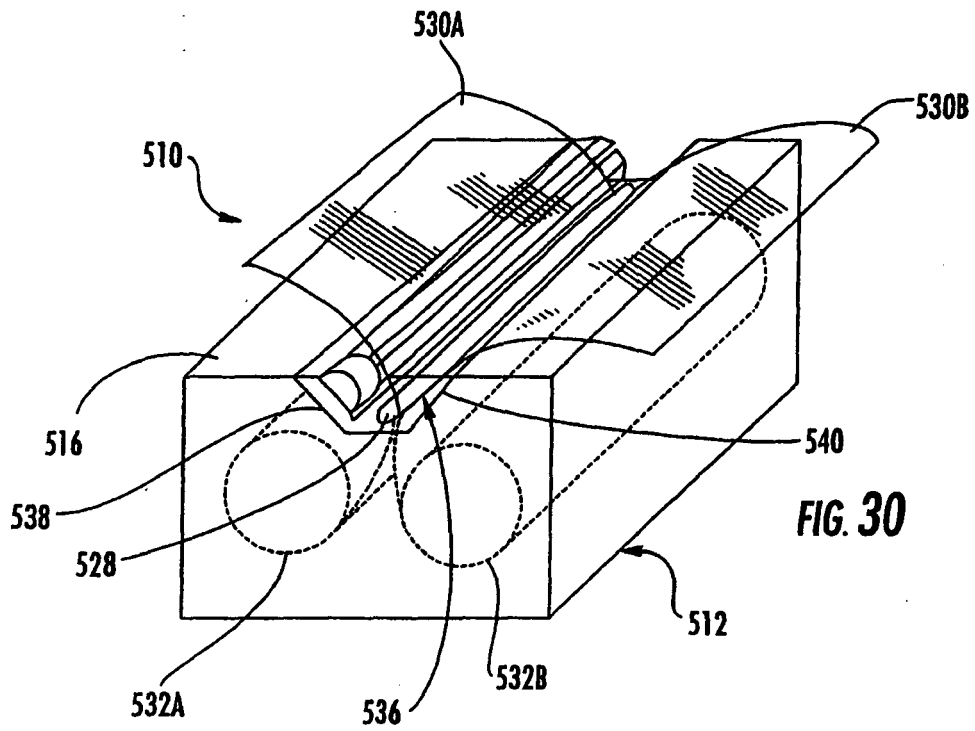


FIG. 26







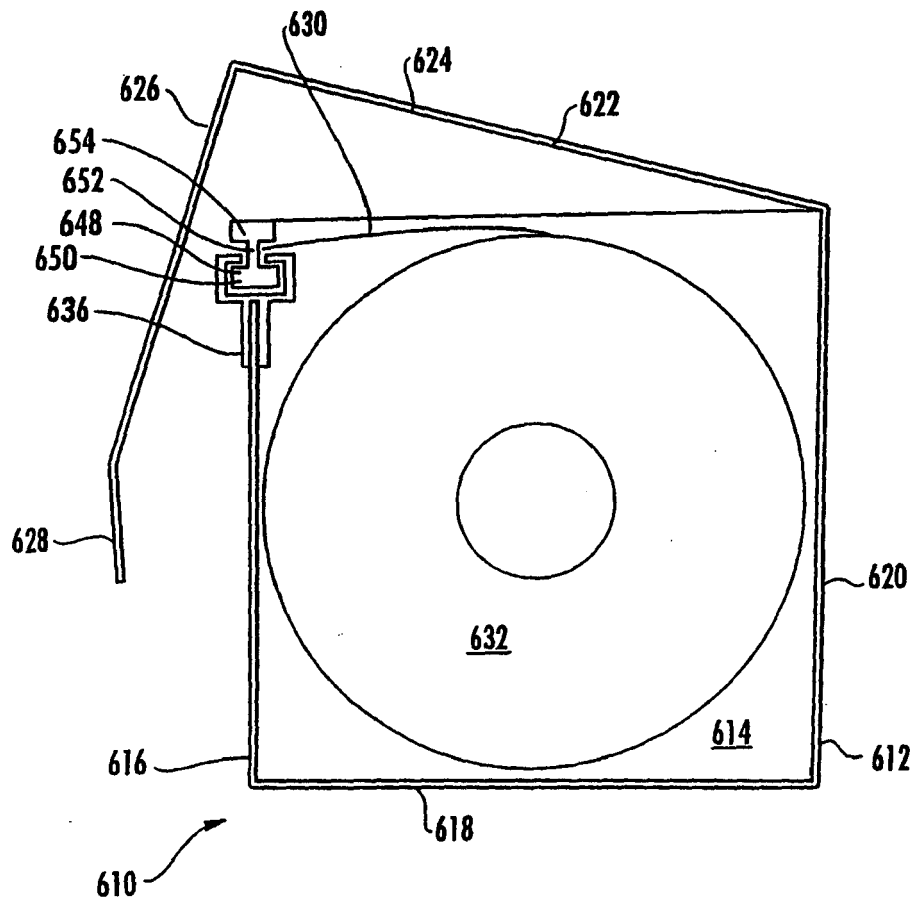


FIG. 33

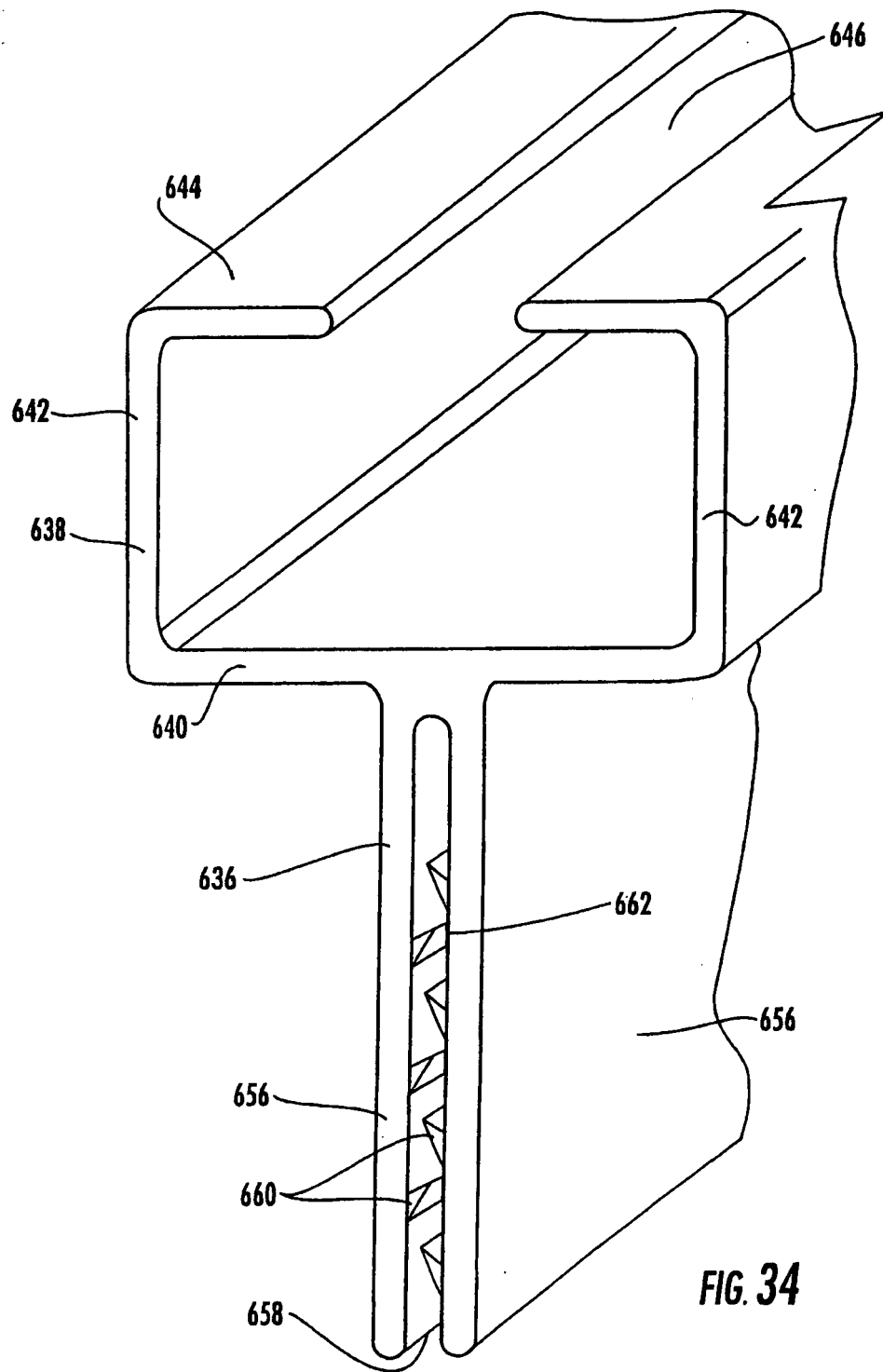


FIG. 34



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 01 4425

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2004/108572 A (S. C. JOHNSON HOME STORAGE, INC; TURVEY, ROBERT, R; SCHULTZ, MARISSA,) 16 December 2004 (2004-12-16)	5-14	INV. B65D83/08
A	* paragraph [0062]; figure 2C * * paragraph [0088] - paragraph [0089]; figures 16,17 *	1-4	
A	----- DE 101 30 578 A1 (MEYER, HOLGER) 16 January 2003 (2003-01-16) * paragraph [0004] - paragraph [0008]; claim 1; figure 1 *	1-14	
A	----- JP 03 187841 A (SHOTARO MOGAMI) 15 August 1991 (1991-08-15) * figures 7,8,15 *	1-14	
A	----- GB 2 370 032 A (* BRITISH POLYTHENE INDUSTRIES PLC) 19 June 2002 (2002-06-19) * abstract; figures 1-3 *	1-14	
A	----- JP 09 221143 A (SHIN ETSU POLYMER CO LTD) 26 August 1997 (1997-08-26) * figure 4 *	1-14	TECHNICAL FIELDS SEARCHED (IPC)
P,A	----- US 2005/166738 A1 (HSU CHIA-TI) 4 August 2005 (2005-08-04) * paragraph [0018] *	1-14	B65D
A,D	----- US 2005/034585 A1 (ANTAL KEITH E) 17 February 2005 (2005-02-17) * the whole document *	1-14	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 4 September 2007	Examiner Segerer, Heiko
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