Aug. 25, 1959 O. L. VINES 2,901,155

CARTON

Filed Dec. 21, 1955 2 Sheets-Sheet 1

FIG. 1

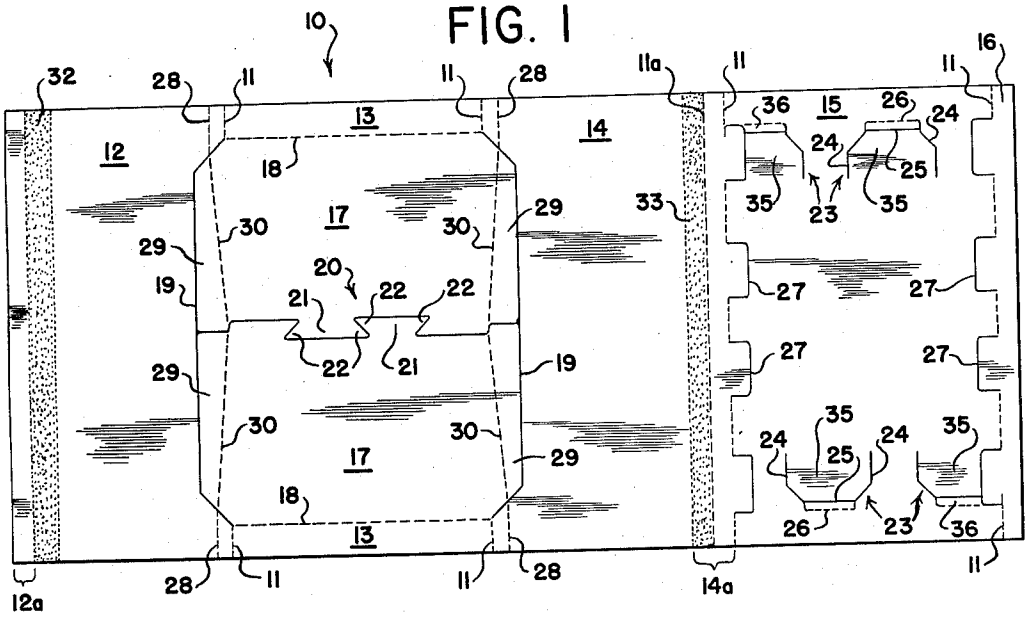
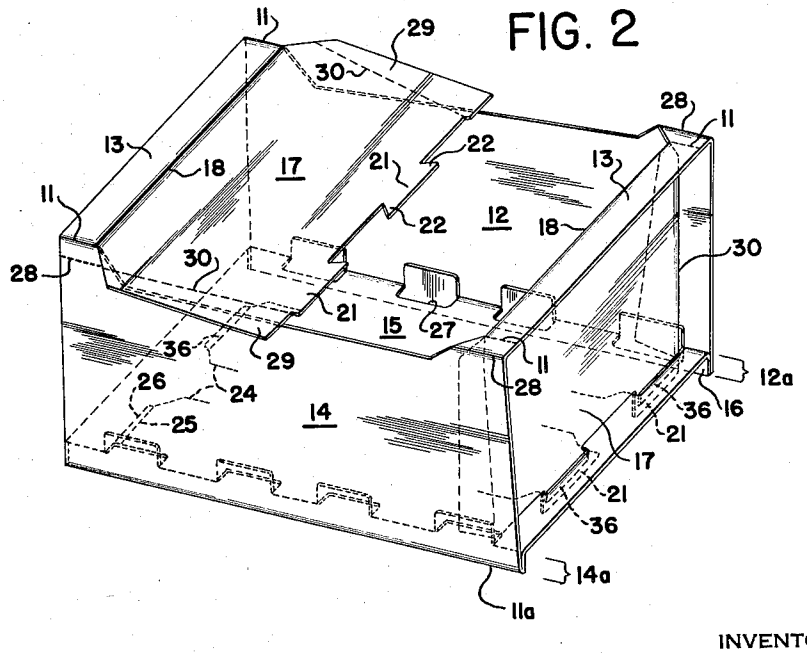


FIG. 2



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CARTON

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FIG. 3

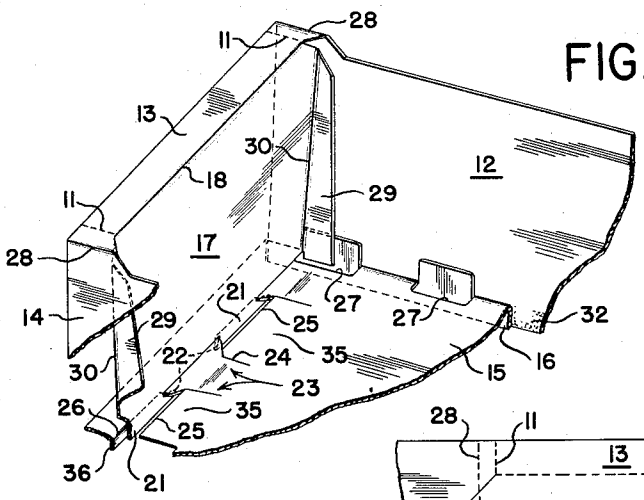


FIG. 4

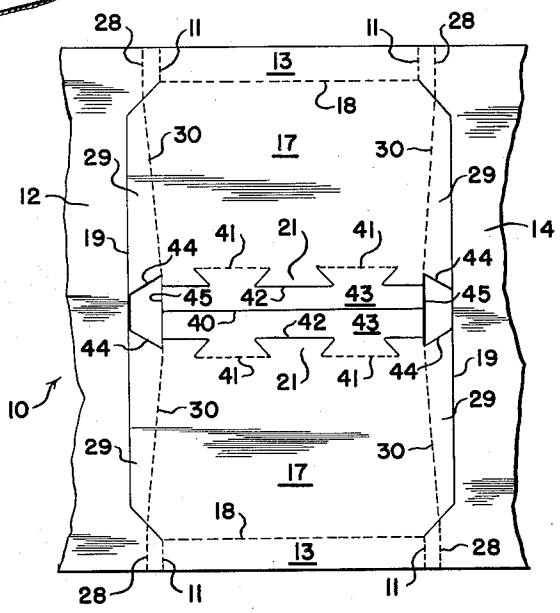


FIG. 6

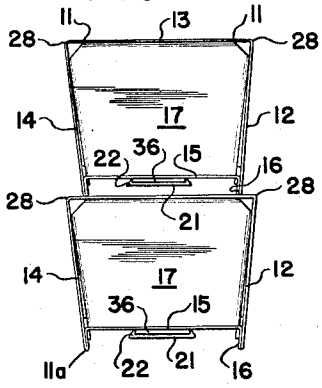
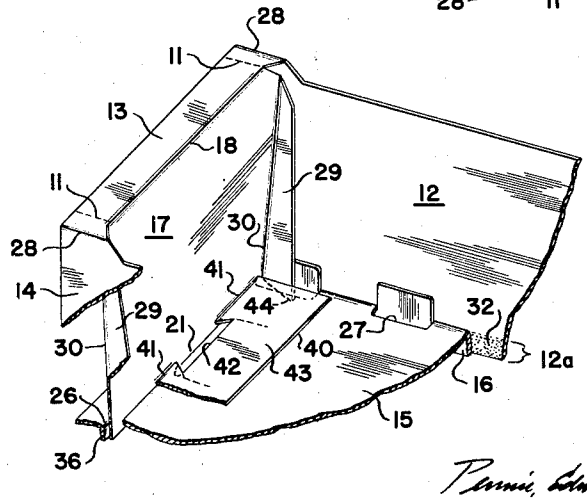


FIG. 5



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2,901,155

CARTON

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Application December 21, 1955, Serial No. 554,567

7 Claims. (Cl. 229—16)

This invention relates to folding cartons, and more particularly to five-sided open top carton construction having sloping side walls.

It has been proposed heretofore to package comestible articles, such as fresh fruits and berries, for distribution and sale in a five-sided or open top container or carton formed from a single rectangular piece of a suitable sheet material such as paper board. The rectangular piece of sheet material comprising the carton blank is provided with lateral fold lines that define the panels which form the two side walls and the top and bottom walls of the erected carton. The top panel is further provided with a pair of fold sections which are folded downwardly and inwardly into the carton to form the end walls thereof when the carton is erected. In order to be produced at a cost competitive with other types of open top cartons, the carton blank must be manufactured by high speed mass production methods and must be assembled and erected into the desired carton by high speed automatic machinery. As a direct consequence of the fact that the carton blank must be folded, glued and erected by the said automatic machinery, the width of the two side walls and the width of the top and bottom panels, respectively, must be substantially the same, and therefore the opposite walls of the carton are parallel to one another. The resulting rectilinear carton makes it difficult to treat with a gaseous agent the material packaged in a group of filled cartons placed side by side. Moreover, the straight sides of the carton make the carton unsuitable as a container for certain delicate and perishable foods, and the fact that the top of the carton is the same width as the bottom has led to some difficulty in stacking one carton on top of another for shipment and display.

I have now developed a five-sided carton structure of the type described which is provided with side walls that diverge or slope outwardly slightly toward the top of the carton, thus adapting the carton for use with the aforementioned perishable fruits and berries. Moreover, the width of the bottom wall of my new carton is appreciably less than the width of the top wall of the carton, thus facilitating stacking of the cartons for shipment and display. My new carton structure is formed from a rectangular carton blank resembling, in general, the carton blank of the aforementioned prior art cartons. However, the side and end walls of my new carton blank are so modified that when the carton is erected a portion of both side wall panels become added to the top wall panel of the carton, thus increasing the width of the top wall with respect to the bottom wall of the carton, with the resulting outward divergence of the side walls toward the top of the carton.

The carton blank from which the new carton construction of my invention is formed comprises a substantially rectangular piece of sheet material provided with a plurality of spaced parallel fold lines extending laterally across the blank, the lateral fold lines defining serially a first side panel, a top panel, a second side panel, a bottom panel, and a glue panel. The lateral fold lines defining the lateral edges of the top panel are spaced apart the same distance as the lateral fold lines defining the lateral edges of the bottom panel. The top panel and the adjoining portions of the two side panels are formed with a pair of fold sections adapted to be folded downwardly and inwardly into the interior of the carton to form the end walls thereof, the fold sections being defined by a pair of longitudinally disposed fold lines extending across the top panel adjacent each longitudinal edge thereof, a pair of laterally disposed channel-shaped cut lines each connecting proximate ends of the pair of longitudinal fold lines and extending an appreciable distance into the proximate side wall panels, and a longitudinal cut line connecting the two channel-shaped cut lines approximately intermediate the pair of longitudinal fold lines. Each of the fold sections is wider than the top panel adjacent the longitudinal fold line connecting the fold section to the top panel, and is the same width as the bottom panel adjacent the longitudinal cut line forming the bottom edge of the fold section. Each of the side panels is provided with supplemental lateral fold lines spaced an appreciable distance from the lateral fold line defining the boundary between the said side panel and the top panel. These supplemental lateral fold lines extend from the proximate longitudinal edge of the rectangular carton blank to the proximate channel-shaped cut line. The longitudinal cut line connecting the two channel-shaped cut lines between the two longitudinal fold lines is configured to define latching tongue portions along the abutting edges of the two fold sections, the latching tongue portions advantageously being provided with ear portions. The bottom panel is provided with openings adapted to receive the latching tongue portions of each fold section when the fold section is folded downwardly and inwardly into the interior of the erected carton. Each of the openings in the bottom panel is formed with two laterally disposed cut lines and a longitudinally disposed cut line extending between the said laterally disposed cut lines.

When the carton blank of my invention is erected to form a "five-sided" or open-top carton, the extra width of the portions of the two fold sections adjacent the top panel causes the portion of each of the side panels disposed between the supplemental lateral fold line and the proximate lateral fold line defining the boundary between the side panel and the top panel to become added to the top panel. As a result, the top panel is appreciably wider than the bottom panel and the side walls of the carton slope or diverge outwardly toward the top of the erected carton.

The carton construction of my invention will be better understood from the following description, in conjunction with the accompanying drawings of which—

Fig. 1 is a plan view of the rectangular carton blank of my invention;

Fig. 2 is a perspective view of the partially erected carton of my invention showing the appearance of the top and side walls of the carton before and after the fold sections are folded downwardly into the interior thereof;

Fig. 3 is a fragmentary perspective view showing one end of the fully erected carton;

Fig. 4 is a fragmentary plan view of a modification of the carton blank of my invention;

Fig. 5 is a fragmentary perspective view showing one end of the carton formed from the carton blank of Fig. 4; and

Fig. 6 is an end view of two of the erected cartons stacked one atop the other.

The five-sided open top carton of my invention is formed from a substantially rectangular piece of sheet

material such as paper board that is provided with appropriate cut lines, fold lines and glue strips as shown in Fig. 1, and that is referred to as a carton blank. The substantially rectangular carton blank **10** is formed with a plurality of spaced parallel fold lines **11** extending laterally across the blank and defining serially a first side panel **12**, a top panel **13**, a second side panel **14**, a bottom panel **15** and a glue panel **16**. The top panel **13** and the adjoining portions of the two side panels **12** and **14** are formed with a pair of fold sections **17** that, when folded downwardly and inwardly into the erected carton, become the two end walls thereof, leaving the top of the carton open to view. Due to the fact that the carton blank must be folded, glued and erected by high speed automatic machinery it is necessary that the width of the first side panel **12** be the same as the width of the second side panel **14**, and that the width of the top panel **13** be the same as the width of the bottom panel **15**. That is to say, it is necessary that the lateral fold lines **11** defining the edges of the first side panel **12** be spaced apart the same distance as the lateral fold lines **11** defining the edges of the second side panel **14**, and that the lateral fold lines **11** defining the edges of the top panel **13** be spaced apart the same distance as the lateral fold lines **14***a* defining the edges of the bottom panel **15**. Because the two-side panels and the top and bottom panel are the same width, respectively, the side walls of the resulting carton are, of necessity, parallel to each other and are substantially normal to the top and bottom walls thereof.

It is the purpose of my invention to provide a carton having sloping side walls that diverge outwardly toward the top wall of the carton, rather than the aforesaid parallel side walls, despite the fact that the carton when initially folded is formed with top and bottom walls of equal width. To accomplish this result, the side wall panels **12** and **14** and the fold sections **17** are formed so that the portion of each side wall panel adjoining the top panel will become added to the top panel when the fold sections are folded downwardly into the erected carton.

As heretofore pointed out, the top panel **13** and the adjoining portions of the two side panels **12** and **14** are formed with a pair of fold sections **17**. The fold sections **17** are defined by a pair of longitudinal fold lines **18** extending across the top panel **13**, a pair of channel-shaped cut lines **19** disposed laterally in the adjacent portions of the side panels **12** and **14**, and a cut line **20** extending longitudinally across the top panel from one lateral cut line **19** to the other. The pair of longitudinal fold lines **18** are spaced apart a distance appreciably greater than twice the height of the end wall of the erected carton and are positioned a short distance inboard from the opposite longitudinal edges of the rectangular carton blank. Each of the channel-shaped cut lines **19** connect proximate ends of the pair of longitudinal fold lines **18** and extend an appreciable distance into the adjoining side wall panels **12** or **14**, as the case may be. The longitudinal cut line **20** is disposed approximately intermediate the pair of longitudinal fold lines **18** and is so configured that it defines along the abutting edges of the two fold sections **17** a plurality of latching tongue portions **21** each of which have locking ear portions **22**. The locking ears **22** of the latching tongue portions **21** are preferably wedge- or dovetail-shaped so that, when received in coextensive tongue-receiving openings formed in the bottom panel **15**, the fold sections **17** will be firmly locked in position with respect to the bottom panel.

The bottom panel **15** of the carton blank is formed with coextensive openings **23** adapted and positioned to receive the latching tongue portions **21** and locking ear portions **22** of the hinged fold sections **17** when the carton is erected. The coextensive tongue-receiving openings **23** advantageously comprise a pair of laterally disposed cut lines **24** connected by a longitudinal cut line **25** and by a longitudinal fold line **26** spaced a short distance outboard of said cut line **25**. The pair of lateral cut lines **24** are configured so that at their inner ends the cut lines are spaced apart a distance slightly greater than the extreme width of the locking ears **22** of the latching tongues **21**, and at their outer ends the cut lines **24** are spaced apart a distance appreciably less than the extreme width of the locking ears **22** of the latching tongue portions (and preferably a distance the same as or only slightly greater than the minimum width of the dovetail-shaped locking ears **22** adjacent the point where the latching tongue **21** joins the associated fold section **17**). Thus, when the fold sections **17** are folded in an arcuate path downwardly and inwardly into the erected carton, the associated latching tongue portions **21** strike the bottom panel **15** between the cut lines **24** at the widest part of the corresponding tongue-receiving opening **23**, thereby depressing the portion of the bottom panel disposed between the said cut lines **24** and allowing the locking ear portions **22** to enter and pass through the plane of the bottom panel and become lodged securely between the pair of lateral cut lines **24** at the narrowest part of said coextensive tongue-receiving opening.

In addition, the top and bottom panels of the carton blank are also advantageously provided with channel-shaped cut lines **27** the ends of which communicate with the proximate lateral fold lines **11**, by means of which cut lines **27** ventilation openings will be formed in the top and bottom panels of the carton when the carton blank is folded and erected. Moreover, in the embodiment of my invention shown in the drawing, the side wall panels **12** and **14** are provided with auxiliary portions **12***a* and **14***a*, respectively, which form foot members for the carton when the carton blank **10** is erected as herein described. In such case, an auxiliary longitudinal fold line **11***a* is provided in the side wall panel **14** to facilitate erection of the carton.

To obtain a carton having sloping side walls despite the fact that the carton when initially folded is formed with top and bottom walls of equal width, the portion of each fold section **17** adjacent the longitudinal fold line **18** connecting it to the top panel **13** is appreciably wider than the top panel, the portion of each fold section **17** adjacent the longitudinal cut line **20** is substantially the same width as the bottom panel **15** of the carton, and each of the side wall panels **12** and **14** is formed with supplemental lateral fold lines **28** spaced an appreciable distance from the lateral fold line **11** defining the boundary between each side panel and the top panel **13**. Advantageously, each of the fold sections **17** comprises a main end wall portion and two associated wing portions **29**, in which case the end wall portion of the fold section **17** is wider than the top panel adjacent the longitudinal fold line **18** connecting it to the top panel and is approximately the same width as the bottom panel adjacent the longitudinal cut line **20** defining the bottom edge thereof. Moreover, as a consequence of the difference in width between the top and bottom portions of the fold section **17**, the wing portions **29** are connected to the associated main end wall portion of the fold section along an oblique fold line **30**. The supplemental lateral fold lines **28** in each side wall panel extend from the proximate longitudinal edge of the carton blank to the proximate channel-shaped cut line **19** where they connect with the proximate ends of the oblique fold lines **30** in the fold sections **17**. The fold lines **28** are all spaced the same distance from the proximate lateral fold line **11**; a distance approximately equal to one-half the difference in width between the top panel **12** and the adjoining end wall portions of the fold sections **17**. The thus-formed fold sections **17** and supplemental fold lines **28** cooperate to provide the desired sloping side walls in a manner hereinafter more fully explained.

To erect the carton a transverse strip of glue **32** is applied to the side panel **12** (or to the glue panel **16**). When the side panels **12** and **14** of the carton are provided with auxiliary foot portions **12***a* and **14***a*, respec-

tively, the glue strip **32** must be spaced an appropriate distance inboard of the outer lateral edge of the side panel **12**, as shown in Fig. 1 of the drawing. In addition, in such case glue is also applied in a strip **33** along the auxiliary foot portions **14***a* of the side wall panel **14** as shown in Fig. 1, care being taken to avoid applying glue to any part of the bottom panel **15**, and in particular to any of the cutout portions thereof that might as a result interfere with the ready erection of the carton. The carton blank **10** is then folded about the lateral fold line **11** defining the boundary between the side wall panel **14** and the bottom panel **15** (or, if the blank **10** is provided with the auxiliary foot portions **12***a* and **14***a* as described, the blank is first folded about the auxiliary lateral fold line **11***a*) so that the bottom panel directly overlies the adjoining side wall panel **14**. The side wall panel **12** is then folded about the proximate lateral fold line **11** so that the panel **12** directly overlies the top panel **13** (and the fold sections **17**) and the glue strip **32** adheres to the glue panel **16** of the carton.

Because the two side wall panels and the top and bottom wall panels are of the same width, respectively, the foregoing gluing and folding operations are best carried out by high speed automatic machinery. Moreover, the resulting folded and glued carton is a flat structure that can be packed and shipped in the flattened condition to consumers who complete the erection of the carton and fill it with the desired commodity. The final erection of the carton is carried out by folding the blank about all of the lateral fold lines **11** until the two side walls are parallel to each other and are substantially normal to the top and bottom walls. At this stage in the erection of the carton, the top wall **13** is still the same width as the bottom wall **15** of the carton, the general appearance of the carton being as shown at the left-hand end of Fig. 2 of the drawing. It is to be noted that at this juncture the side walls and top wall are hinged about the lateral fold lines **11** defining the boundary between the top wall and the two side walls.

The fold sections **17** of the top panel are then folded downwardly and inwardly into the interior of the carton to form the end walls thereof. Due to the fact that the portion of the fold section **17** adjoining the top panel **13** is wider than the top panel, the fold section **17** cannot be folded downwardly into the carton unless a small portion of each of the two side wall panels is added to the top panel to increase the width of the top panel. Accordingly, as the fold section **17** is folded downwardly into the carton, the two side wall panels are automatically folded about the supplemental fold lines **28** as shown at the right-hand end of Fig. 2, whereby the portions of the two side panels between these supplemental fold lines **28** and the proximate fold lines **11** become added to the top panel **13**. This addition of a portion of the two side wall panels to the top panel occurs automatically when the fold sections **17** are folded as described. With the width of the top panel increased by the addition of a portion of the adjoining side wall panels, the top wall of the carton is now wider than the bottom wall and, as a consequence, the side walls of the carton slope outwardly toward the top wall, as shown at the right-hand end of Fig. 2.

As each fold section **17** is pressed into the interior of the carton, the wing portions **29** thereof are automatically folded inwardly and upwardly until they are at right angles to the end wall portion of the fold sections **17**. Moreover, as each fold section **17** is moved downwardly in its arcuate path of travel, the latching tongue portions **21** thereof strike the bottom panel **15** at the corresponding tongue-receiving openings **23**, thereby depressing the flap portions **35** of bottom panel disposed between the pairs of lateral cut lines **24**. The locking ears **22** thereupon enter and pass through the plane of the bottom panel and, as the fold section **17** approaches its final position, become firmly wedged between the pairs of cut lines **24** at their narrow outboard ends. As the fold section **17** approaches its final position, the latching tongue portions **21** slide off the outboard edges (defined by the cut line **25**) of the aforesaid depressed flap portions **35**, thereby allowing these flap portions to spring back to the plane of the bottom panel. Simultaneously, the small hinged portions **36** of the bottom panel between the longitudinal cut line **25** and the fold line **26** are folded downwardly as shown in Fig. 3 to provide a permanent opening in the bottom panel just large enough to accommodate the latching tongues **21** at their narrowest point. The fold sections **17** are thus firmly locked in their final position, inward and outward movement being prevented by the abutting edges of the flap portion **35** and the hinged portion **36** of the bottom panel which bear against the latching tongues **21**, and vertical separation being prevented by the dovetail-shaped ears **22** which are wedged firmly in the narrowest part of the tongue-receiving opening **23**. The construction and cooperation of the latching tongue and locking ear portions of the fold section **17** and the coextensive latching tongue portion-receiving openings **23** in the bottom panel are shown clearly in Fig. 3 of the drawing.

A modification of my novel carton construction is shown in Figs. 4 and 5 of the drawing the purpose of which is to provide a five-sided or open top carton of greater length than heretofore possible. In the carton construction of the type hereinbefore described the length of the erected carton (which corresponds to the lateral dimension of the carton blank) is a function of and is limited by the height of the side walls of the carton. That is to say, if a carton has side walls of a given height, the end walls of the carton must of necessity be approximately the same height, and therefore the parallel fold lines **18** by which the end walls (i.e., the fold sections **17**) are hinged to the top panel must be spaced apart a distance only slightly greater than twice the height of the side walls of the carton. Thus, the length of the carton, which is approximately equal to the distance separating the pair of fold lines **18**, is ordinarily only slightly greater than twice the height of the end walls and side walls of the erected carton.

By means of the modification of the carton blank **10** shown in Figs. 4 and 5 of the drawing, it is possible to space the pair of longitudinal fold lines **18** a distance apart greater than heretofore possible, thereby increasing the length of the erected carton by a corresponding amount. To provide for the increase in lateral spacing of the longitudinal fold lines **18**, the overall length of each fold section **17** must be increased by a corresponding amount. As a result, the overall length of each fold section is greater than the desired height of the end wall of the erected carton, and therefore the fold sections must be modified to make allowance for their excess length. Accordingly, as shown best in Fig. 4, the fold sections **17** are separated at their abutting edges by a longitudinal cut line **40** spaced approximately intermediate the longitudinal fold lines **18**. Each fold section **17** is further formed with a fold line **41** extending longitudinally across the fold section and spaced a distance inboard from the proximate longitudinal fold line **18** a distance approximately equal to the height of the end wall of the erected carton. The fold sections **17** are further formed with dovetail-shaped cut lines **42** the ends of which communicate with the fold line **41**, the said dovetail cut lines **42** defining the latching tongue portion **21** and locking ear portions **22** of the end wall of the carton.

To facilitate folding the modified fold sections **17** downwardly into the carton, the bottom edges of the wing portions **19** are defined by oblique cut lines **44** which extend from the ends of the fold lines **41** to the proximate lateral cut line **19**. Moreover, the portions of the blank bounded by the cut lines **19**, **44** and **45** are dis-

carded to prevent undue interference with the erection of the carton.

When the fold sections 17 modified as described are folded downwardly and inwardly into the interior of the partly erected carton, the bottom edge of the excess portion 43 of the fold section strikes the bottom wall of the carton and folds about the fold line 41 as shown in Fig. 5. With the excess portion 43 of the end wall fold section 17 thus folded out of the way, the latching tongue portions 21 enter the bottom wall through the coextensive tongue-receiving openings 23 therein in the manner described hereinbefore.

In a further modification of my invention the carton blank 10 is adapted to form a carton the end walls of which slope or diverge outwardly toward the top of the carton, in addition to the sloping side walls hereinbefore described. In this modification of the carton blank the distance between the longitudinal cut line 20 (or the longitudinal fold lines 41) and the proximate fold line 18 is appreciably greater than the interior height of the erected carton, resulting in fold sections 17 the end wall portions of which are appreciably longer than the height of the carton interior. When the overlong fold sections 17 are folded downwardly and inwardly into the erected carton, the lower edges of the fold sections (defined by said cut line 20 or said fold lines 41) strike the bottom panel of the carton before the fold sections become normal to the bottom panel. Thus, when the fold sections 17 come to rest with the latching tongue portions 21 thereof received in the coextensive opening 23 of the bottom panel, the resulting end walls are at a slightly obtuse angle with respect to the bottom wall; the lower edges of the end walls being slightly closer together than the upper edges thereof. The sloping side walls and end walls of the carton help support the contents contained in the upper part of the carton and hence help avoid undue pressure on any perishable and easily damaged articles contained in the lower part of the carton.

It will be seen from the foregoing description that the carton blank of my invention possesses all of the advantages inherent in a blank that can be folded, glued and erected by high speed machinery, and at the same time possesses all the advantages of a carton having sloping side walls which contribute to the utility and versatility of the carton structure. Among the latter advantages are the ability of the cartons to be stacked one on top of the other as shown in Fig. 6, the support the sloping side walls provide for the contents of the carton, and the ease with which the stacked cartons can be treated with a gaseous agent or ventilated, as the case may be.

I claim:

1. A carton blank comprising a substantially rectangular piece of sheet material provided with a plurality of spaced parallel fold lines extending laterally across the blank, said lateral fold lines defining serially a first side panel, a top panel, a second side panel, a bottom panel, and a glue panel, the lateral fold lines defining the top panel being spaced apart the same distance as the lateral fold lines defining the bottom panel, the top panel and the adjoining portion of the two side panels being formed with a pair of fold sections each connected at its top edge to the top panel along one of a pair of longitudinal fold lines and each adapted to be folded downwardly and inwardly into the interior of the erected carton to form one of the end walls thereof, each fold section being wider than the top panel adjacent the top edge of said fold section and being the same width as the bottom panel adjacent the bottom edge of said fold section, each side panel additionally being provided with supplemental lateral fold lines spaced an appreciable distance from the lateral fold line defining the boundary between said side panel and the top panel, each of said supplemental lateral fold lines extending from the longitudinal edge of the rectangular carton blank to the proximate edge of said fold sections, the bottom edges of said fold sections being configured to define latching tongue portions the sides of which are provided with locking ear portions, said bottom panel being provided with openings adapted to receive and retain the latching tongue portions of each fold section when the fold section is folded downwardly and inwardly into the interior of the erected carton.

2. A carton blank comprising a substantially rectangular piece of sheet material provided with a plurality of spaced parallel fold lines extending laterally across the blank, said lateral fold lines defining serially a first side panel, a top panel, a second side panel, a bottom panel, and a glue panel, the lateral fold lines defining the top panel being spaced apart the same distance as the lateral fold lines defining the bottom panel, the top panel and the adjoining portion of the two side panels being formed with a pair of fold sections adapted to be folded downwardly and inwardly into the interior of the erected carton to form the end walls thereof, each of said fold sections being connected to the top panel along one of a pair of longitudinal fold lines extending across the top panel adjacent each longitudinal edge thereof and being separated from the other fold section by a longitudinal cut line extending across the top panel approximately intermediate of said longitudinal fold lines, said longitudinal cut line defining the bottom edge of both of said fold sections and being configured to define latching tongue portions the sides of which are formed with locking ear portions, each fold section being wider than the top panel adjacent the longitudinal fold line connecting said fold section to the top panel and being the same width as the bottom panel adjacent the longitudinal cut line defining the bottom edge thereof, each side panel additionally being provided with supplemental lateral fold lines spaced an appreciable distance from the lateral fold line defining the boundary between each side panel and the top panel, each supplemental lateral fold line extending from the longitudinal edge of the rectangular carton blank to the proximate edge of said fold sections, said bottom panel being provided with openings adapted to receive the latching tongue portions of each fold section when the fold section is folded downwardly and inwardly into the interior of the erected carton, each of said openings in the bottom panel comprising two laterally disposed cut lines and a longitudinally disposed cut line extending between said laterally disposed cut lines.

3. A carton blank comprising a substantially rectangular piece of sheet material provided with a plurality of spaced parallel fold lines extending laterally across the blank, said lateral fold lines defining serially a first side panel, a top panel, a second side panel, a bottom panel, and a glue panel, the lateral fold lines defining the top panel being spaced apart the same distance as the lateral fold lines defining the bottom panel, the top panel and the adjoining portion of each side panel being formed with a pair of fold sections adapted to be folded downwardly and inwardly into the interior of the erected carton to form the end walls thereof, said pair of fold sections being defined by (*a*) a pair of longitudinal fold lines extending across the top panel adjacent each longitudinal edge thereof, (*b*) a pair of laterally disposed channel-shaped cut lines each connecting the proximate ends of said pair of longitudinal fold lines and each extending an appreciable distance into the proximate side wall panel, and (*c*) a longitudinal cut line connecting the two channel-shaped cut lines approximately intermediate said pair of longitudinal fold lines, said longitudinal cut line defining the bottom edge of both of said fold sections, each fold section being wider than the top panel adjacent the longitudinal fold line connecting said fold section to the top panel and being the same width as the bottom panel adjacent the longitudinal cut line defining the bottom edge thereof, each side panel additionally being provided with supplemental

lateral fold lines spaced an appreciable distance from the lateral fold line defining the boundary between said side panel and the top panel, each supplemental lateral fold line extending from the proximate longitudinal edge of the rectangular carton blank to the proximate channel-shaped cut line of said fold sections, the bottom edges of said fold sections being formed with latching tongue portions the sides of which are formed with locking ear portions, said bottom panel being provided with openings adapted to receive the latching tongue portions of each fold section when the fold section is folded downwardly and inwardly into the interior of the erected carton, each of said openings in the bottom panel being formed from two laterally disposed cut lines and a longitudinally disposed cut line extending between said laterally disposed cut lines.

4. A carton blank comprising a substantially rectangular piece of sheet material provided with a plurality of spaced parallel fold lines extending laterally across the blank, said lateral fold lines defining serially a first side panel, a top panel, a second side panel, a bottom panel, and a glue panel, the lateral fold lines defining the top panel being spaced apart the same distance as the lateral fold lines defining the bottom panel, the top panel and the adjoining portion of each side panel being formed with a pair of fold sections adapted to be folded downwardly and inwardly into the interior of the erected carton to form the end walls thereof, said pair of fold sections being defined by (*a*) a pair of longitudinal fold lines extending across the top panel adjacent the longitudinal edges thereof and being spaced apart a distance appreciably greater than twice the height of the end wall of the erected carton, (*b*) a pair of laterally disposed channel-shaped cut lines each connecting the proximate ends of the pair of longitudinal fold lines and each extending an appreciable distance into the proximate side wall panel and (*c*) at least one longitudinal cut line connecting the two channel-shaped cut lines approximately intermediate of said longitudinal fold lines and defining the bottom edges of said fold sections, each of said fold sections being connected to said top panel along one of said pair of longitudinal fold lines and comprising an end wall portion and two wing portions, the end wall portions of each fold section being wider than the top panel adjacent the longitudinal fold line connecting said fold section to the top panel and being the same width as the bottom panel adjacent the longitudinal cut line defining the bottom edge thereof each of said wing portions being connected to the associated end wall portion along an oblique fold line, each side panel additionally being formed with supplemental lateral fold lines in each side panel spaced an appreciable distance from the lateral fold line defining the boundary between each side panel and the top panel, each supplemental lateral fold lines extending from the longitudinal edge of the rectangular carton blank to the proximate channel-shaped cut line of said fold sections and connecting to the outboard end of the proximate oblique fold line, the longitudinal cut line defining the bottom edges of said fold sections being configured to define lacthing tongue portions the sides of which are formed with locking ear portions, said bottom panel being provided with openings adapted to receive corresponding latching tongue portions of each fold section when the fold section is folded downwardly and inwardly into the interior of the erected carton, each of said openings in the bottom panel comprising two laterally disposed cut lines and a longitudinal cut line extending between said laterally disposed cut lines.

5. A carton blank according to claim 4 in which the pair of fold sections are defined by (*a*) a first pair of longitudinal fold lines extending across the top panel adjacent the longitudinal edges thereof, (*b*) a pair of laterally disposed channel-shaped cut lines each connecting the proximate ends of the pair of longitudinal fold lines and each extending an appreciable distance into the proximate side wall panel, (*c*) a longitudinal cut line connecting the two channel-shaped cut lines approximately intermediate said first pair of longitudinal fold lines, and (*d*) a second pair of longitudinal fold lines disposed one on either side of said longitudinal cut line and each spaced from the proximate longitudinal fold line of said first pair of fold lines a distance approximately equal to the interior height of the erected carton, each of said fold sections being formed with at least one dovetail-shaped cut line the converging ends of which connect with the proximate longitudinal fold line of said second pair of fold lines, said dovetail-shaped cut lines defining latching tongue portions adapted to be received in the corresponding openings formed in the bottom panel of the erected carton.

6. A carton blank according to claim 4 in which the locking ears of the latching tongue portions are dovetail-shaped, and in which the corresponding tongue-receiving opening in the bottom panel is defined by a pair of laterally disposed cut lines, a longitudinal cut line and a longitudinal fold line, both of said longitudinal lines extending between said laterally disposed cut lines, the inboard ends of said pair of laterally disposed cut lines being spaced apart a distance greater than the extreme width of the locking ears of the corresponding latching tongue portion and the outboard ends of said pair of laterally disposed cut lines being spaced apart a distance approximately the same as the minimum width of said dovetail-shaped locking ears, said longitudinal fold line connecting the said outboard ends of said laterally disposed cut lines, and said longitudinal cut line being spaced a short distance inboard of said longitudinal fold line.

7. A collapsible open top carton formed from a rectangular carton blank initially provided with two side wall panels of equal width, a top wall panel and a bottom wall panel of equal width, the integral connection of the four panels being completed by the gluing together of the portions of the panels at the extremities of the blank and a pair of fold sections formed from the center portion of the top wall panel and adjoining portions of the two side wall panels, said carton comprising a bottom wall formed from said bottom wall panel, two side walls formed from the lower portions of said side wall panels, a partial top wall formed from the outboard portions of the top wall panel and adjacent upper portions of the side wall panels, and two end walls formed from said pair of fold sections, said fold sections from which said end walls are formed being wider than the top wall panel adjacent the upper edges thereof and being the same width as the bottom wall panel adjacent the lower edges thereof, the said upper portions of each side wall panel adjacent the said outboard portions of said top wall panel being disposed substantially in the plane of the top wall of the erected carton whereby the top wall of the carton is wider than the bottom wall of the carton and the side walls of the carton diverge outwardly from the bottom wall toward the top wall thereof.

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