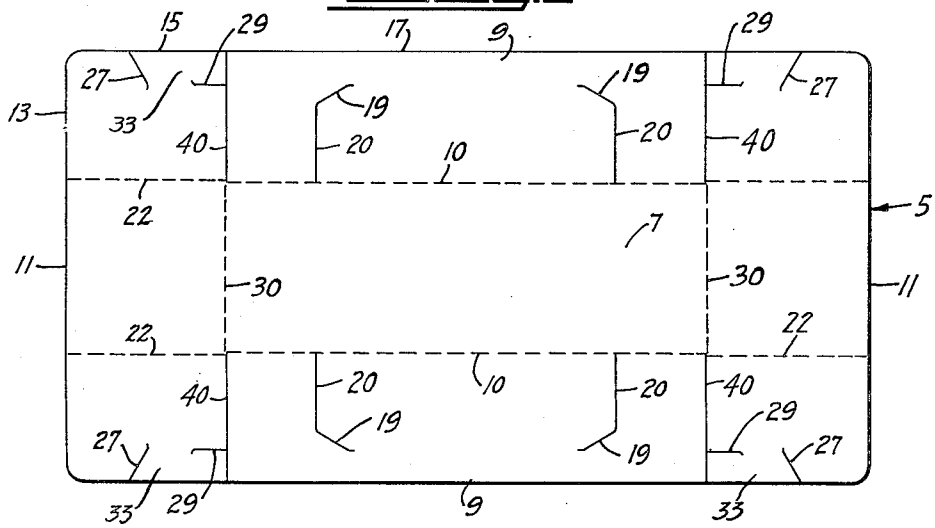
Nov. 7, 1950 R. B. MELLER 2,528,900

CONSTRUCTION OF CONTAINERS

Filed Feb. 26, 1945 4 Sheets-Sheet 1

Fig. 1



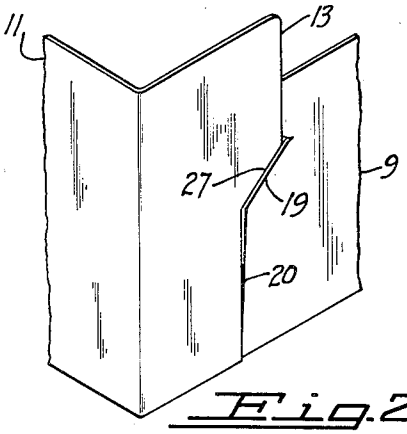


Fig. 2

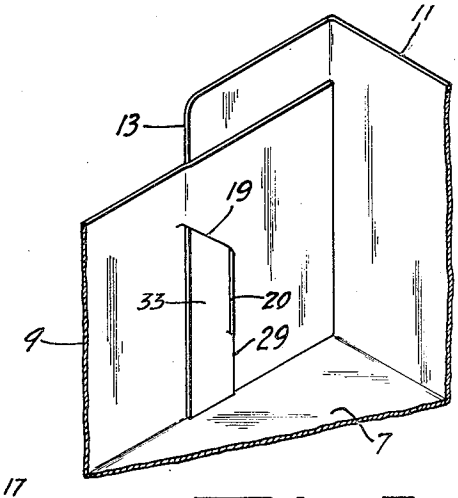


Fig. 3

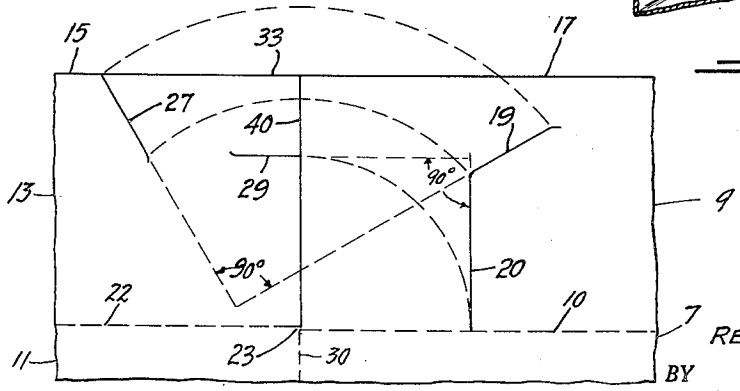


Fig. 4

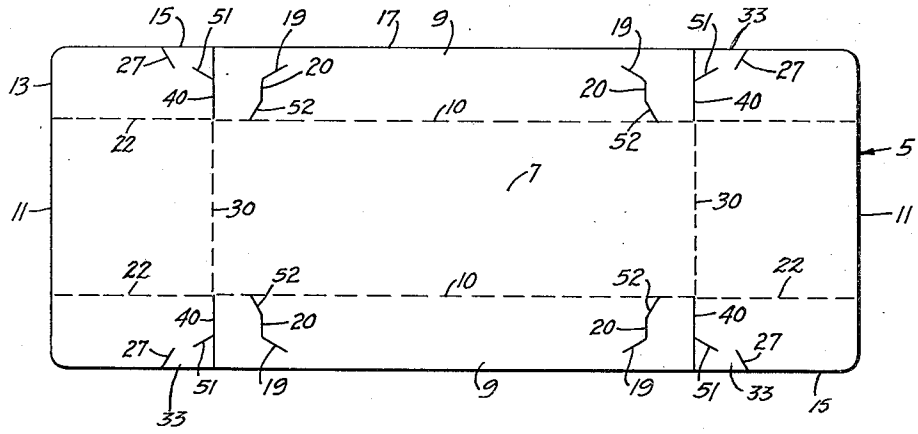
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Nov. 7, 1950 R. B. MELLER 2,528,900

CONSTRUCTION OF CONTAINERS

Filed Feb. 26, 1945 4 Sheets-Sheet 2

Fig. 5



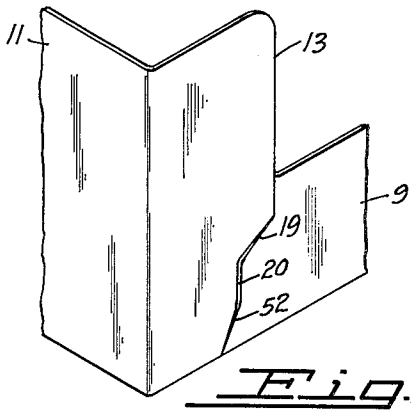


Fig. 6

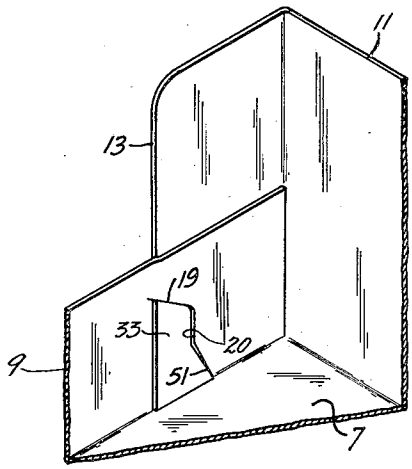


Fig. 7

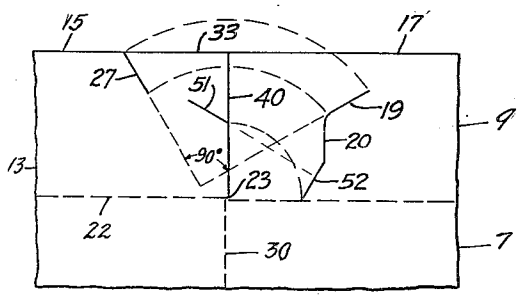


Fig. 8

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BY Robert N. Cannon,

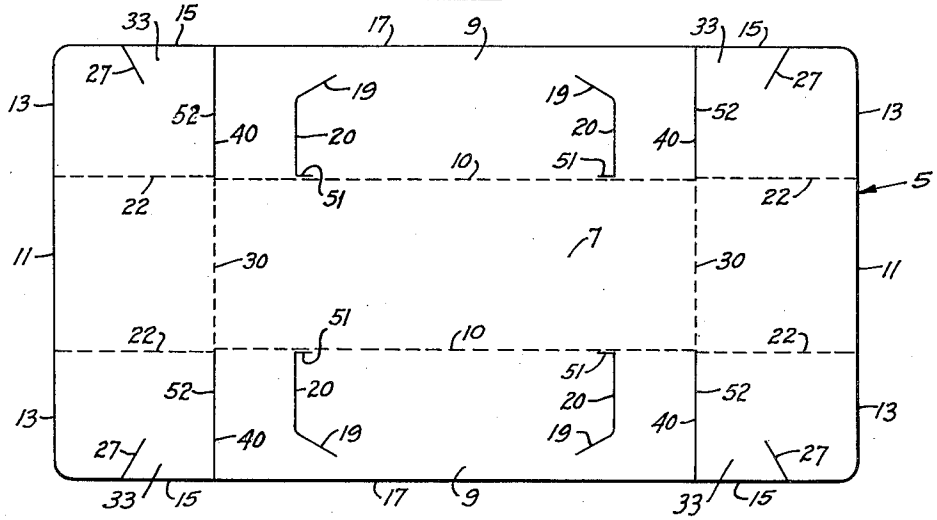
ATTORNEY

Nov. 7, 1950 R. B. MELLER 2,528,900

CONSTRUCTION OF CONTAINERS

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Fig. 9



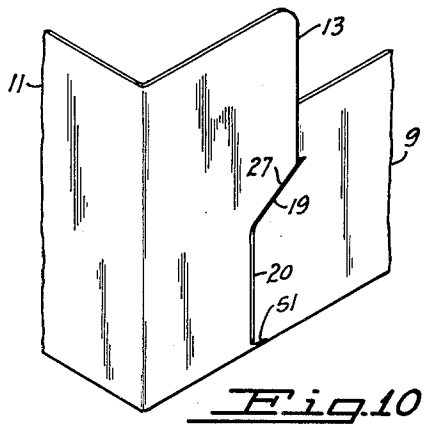


Fig. 10

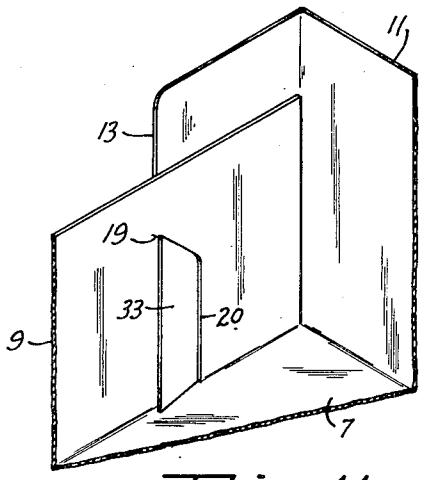


Fig. 11

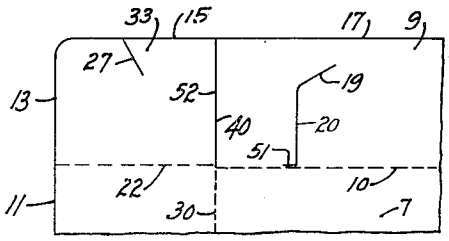


Fig. 12

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Nov. 7, 1950 R. B. MELLER 2,528,900

CONSTRUCTION OF CONTAINERS

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Fig. 13

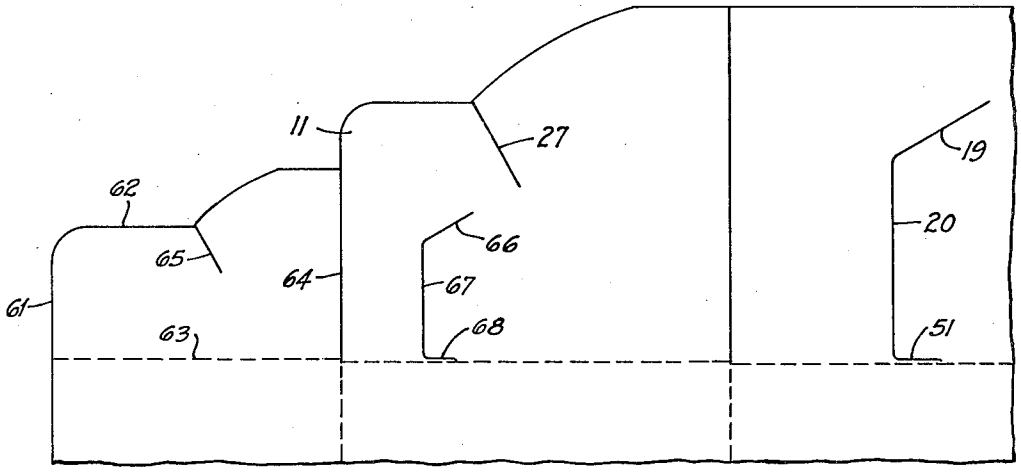


Fig. 14

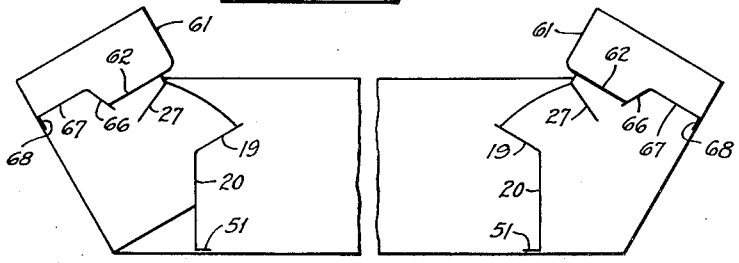
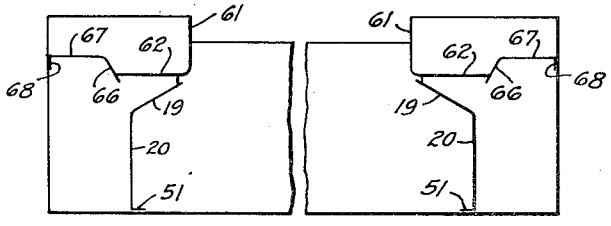


Fig. 15



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Patented Nov. 7, 1950 2,528,900

UNITED STATES PATENT OFFICE

2,528,900

CONSTRUCTION OF CONTAINERS

Reginald B. Meller, Oakland, Calif., assignor to Bemiss-Jason Company, a corporation of California

Application February 26, 1945, Serial No. 579,727

7 Claims. (Cl. 229—35)

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This invention relates to an improved container and more particularly to one formed from creasable sheet material having a certain degree of stiffness and resiliency such as is found in some types of cardboard, thin sheetmetal, flexible plastic sheet material and the like.

In my Patent No. 2,366,419 issued January 2, 1945, I have disclosed a container made of the aforementioned materials and wherein each corner was formed and locked by a cut in one corner element engaging a cut in another corner element in a line-to-line engagement instead of the hook or point-to-point engagement characteristic of prior containers. As will appear upon a detailed consideration of that patent, one of the cuts was provided by cutting inwardly from the edge of a corner element a sufficient distance to provide the requisite length of line contact with the cut in the other corner element upon subsequent assembly. While this was quite satisfactory, I have now been able to improve upon the construction in the following particulars:

First, the construction of the container, in accordance with this invention, is such that I am able to use a creasable sheet material of less stiffness and strength than is required in the construction of my patent and still provide a satisfactory container.

Second, I provide a container construction in which the rigidity of each corner is improved, any tendency of the sidewalls to spread away from the end walls being obviated to a greater degree than has been achieved heretofore.

Third, in place of cutting the sidewall element, I form a slot therein, thus preserving the strength of the wall.

Fourth, the element interlocked with the side wall element is available for and engages the third element forming the corner, thus improving the strength of the corner and enabling empty or filled containers to be stacked without the side or end elements spreading away from one another.

Fifth, in accordance with this invention the blanks providing the containers can be cut in a continuous side-by-side relationship, thus effecting a material economy in the stock from which the containers are manufactured and, what is possibly even more important, obviating entirely the necessity to strip any cut out portions from each blank as they are manufactured. In the manufacture of a great number of container blanks, the removal of cut out portions is extremely troublesome, expensive and requires considerable care and accuracy if the blanks are

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not to be injured. This is particularly so if the blanks are to be assembled by machine.

The invention includes all of the foregoing objects and, in addition, others which will appear hereinafter.

In the drawings accompanying and forming a part hereof, Figure 1 is a plan of a blank from which my improved container is formed.

Figure 2 is an outside view in perspective of a corner of my improved container.

Figure 3 is an inside view in perspective of the same corner.

Figure 4 is a fragmentary view illustrating the construction and relation between certain of the elements.

Figure 5 is a plan view of a blank illustrating another form of my improved container.

Figure 6 is an outside view in perspective of a corner of the container formed from the blanks shown in Figure 5, while Figure 7 is an inside view in perspective of the same corner.

Figure 8 is a fragmentary plan view of a corner element illustrating the construction and relation between the several components.

Figure 9 is a plan view of a modified form of blank from which an improved container of this invention can be formed.

Figure 10 is an outside view in perspective of a corner formed of the modified improved container.

Figure 11 is an inside view in perspective of the same corner.

Figure 12 is a fragmentary plan view of another modified form illustrating one corner construction of the present invention.

Figure 13 is a plan view of a portion of a corner of another modified form of container.

Figure 14 illustrates the container shown in partial plan view in Figure 13 assembled partially, while Figure 15 shows the container completely assembled.

In Figures 9–12, I have illustrated a form of blank in which only a single lock is provided, the cut **29** being totally omitted and the lock being by reason of the engagement, in a face-to-face contact, of the cuts **27** and **19**.

In its preferred form, referring particularly to Figures 1 through 4, my invention provides for a container blank **5** of substantially rectangular form and scored as at **10**, **22** and **30**, to define a bottom section **7** and side and end wall sections **9** and **11**, respectively. Extending from each end of an end wall section **11**, and preferably integral therewith, is a wing **13** separated from the adjacent side wall section **9** by cut **40**. The

free edge 15 of wing 13 terminates preferably in alignment with the free longitudinal edge 17 of the adjacent side wall section 9. It will be noted that the container blank is rectangular in outline and that no cut out portions are provided. The blank can therefore be cut continuously from a continuous strip without any wastage whatsoever except the material cut off as trim along each end wall section 11, edges 15 and 17 on one blank being common to the adjacent blank and being formed on the two adjacent blanks by one cut.

Each side wall section 9, in proximity to each end thereof, is provided with a cut 19, this cut being made at some distance in from the free longitudinal edge 17 of the side and in a direction preferably at an acute angle to the cut 40. Each side wall section 9 also includes a cut 20 extending parallel to cut 40 and with cut 19 forming a slot opening toward the wing 13.

Each end wall wing 13 is suitably cut to be received cooperatively in the slot provided by cuts 19 and 20 in the adjacent side wall when the side and end walls are formed into corner forming position as in Figures 2 and 3, usually at 90° to one another. To ensure that cut 27 and cut 19 inter-engage in the desired line-to-line contact, cut 27 is formed in a direction normal to that of cut 19 and at such a distance from the center or apex 23 of the corner that the inner edge of cut 27 falls inside of the end of cut 19. This can be ensured by having cut 27 and cut 19 terminate upon a circle swung about center 23, the cuts then terminating at the same radial distance from center 23 about which the end wall and side wall swing into position. Cut 19 can extend inwardly a greater distance if desired.

One can utilize the construction so far defined in which case the corner will lock only due to the line-to-line engagement of cuts 19 and 27. However, by providing cut 29 in each wing 13 at the same radial distance from center 23 as cut 20, an additional interlocking engagement is provided, cut 29 also being normal to cut 20.

The blank is now in condition to be assembled into a container. In forming the box, the side wall and end wall sections 9 and 11 of the blank are creased along the score lines 10, 22 and 30 of the blank to form the respective side walls and end walls, and either simultaneously with or following such creasing, the side walls 9 are pressed inwardly at the same time that the end wall sections 11 are moved inwardly on the bottom 7. The wings 13 are also moved about crease lines 22, the slots formed by cuts 19 and 20 being opened and locking tab 33 moved into position to lock the end walls, the wings, the sides, and the bottom in position as appears in Figures 2 and 3. Referring to Figure 3, it is to be noted that the tab portion 33 of the wing 13 which extends into cuts 19 and 20 engages bottom 7 and so provides a support for the wing directly upon the bottom of the container while the entire end of the side wall abuts the end wall. This is of material advantage, enabling a lighter stock or one having less stiffness to be employed at the same time that a more rugged and rigid container is provided.

I have previously indicated in connection with the structure shown in Figures 1 through 4 that one or two locks could be provided between the several elements making up each corner of the container. In the modification shown in Figures 5–8, two locks are also provided. However, in this case, instead of cut 29 being provided normal to cut 40, it is positioned at an angle thereto, while cut 20 is formed with an angular cut 52 at its lower end, the two cuts being designated as 51 and 52. As appears in Figure 8, cut 51 is normal to cut 52 and is formed with its inner end at the same radial distance from center 23 of the corner as the inner end of cut 51 so cut 51 inter-engages cut 52. By forming the two cuts at an angle to cut 40, the final corner is possessed of greater rigidity.

While I have disclosed the preferred embodiment of my invention in detail, I do not wish to be limited in my protection to such details as the specific embodiments disclosed are susceptible to change and modification without departing from the principles and spirit of my invention. For example, a container may be constructed with the end walls of the same height as the side walls by foreshortening the end walls or by increasing the height of the side walls. The modifications or embodiments shown are particularly suited to the display of articles such as doughnuts and to the wrapping of these in the usual cellophane or waxpaper heat sealing and wrapping machines. Also, in place of providing an open container, as the form illustrated provides, additional elements can be included to provide a top or closure means so that a box is provided. Also, in case the corner to be formed is one in which the several elements are to be at an angle greater or less than 90°, then the angular value to be employed in providing cuts 27—19, 29—20 and 51—52 in the proper relationship can be suitably altered.

To facilitate assembly of any of the forms depicted, I have indicated in Figures 9 and 12 the provision of additional cuts 51. Each of these cuts is preferably offset slightly from the fold lines 10 so that edge 52, defining one side of cut 40 on wing 15, will seat upon the material between cut 51 and the fold line 10. In the form of device shown in Figure 9, the cuts 51 are shown as continuing in the same direction as cut 19 while in Figure 12 the cuts are shown as extending in a direction opposite to cut 19. The form (Figure 9) in which the cut extends in the same direction as cut 19 is preferred, inasmuch as it simplifies manufacture and enables the tongue so provided to spring out of the way and permit the entering portion of wing 15 to thread in easily. Also, when wing portion 33 is threaded into position, as appears in Figure 11, it tends to spread out away from side wall 9, thus locking the corner very securely.

The cut 51 enables the structure to be assembled readily by machine, inasmuch as it facilitates the threading of wing 15 into and through cuts 19 and 20, particularly into the final assembly position.

In Figures 13, 14 and 15, I have depicted one form of the device which is particularly suited to the packaging of loose, bulk products such as potato chips and the like, or to assembly of the package about the product. As is known, potato chips are quite fragile yet, because of their irregular size and shape, they are difficult to package, and heretofore they have never successfully been placed in a carton. Their packaging in bags is undesirable because of the difficulty attendant upon the operation and because the bag offers so little protection. Referring to Figure 13, I have shown a suitable carton blank manufactured as I have prevoiusly indicated in connection with Figures 1 through 12. However,

in this instance, end portion 11 includes another end portion 61 having a wing 62 defined by a score line 63 and by cut 64 separating it from the end portion 11. Also, in end portion 11, cuts 66, 67 and 68 have been provided corresponding respectively to cuts 19, 20 and 51 in the previously described structure. In operation, the end 61 is first made up, wing 62 being threaded into cuts 66, 67 and 68 until cut 65 engages with cut 66. The wing 15 is then threaded through cuts 19, 20 and 51 so that the device, in side elevation, appears as in Figure 14. If, in this position, a previously weighed mass of potato chips are discharged into the container and the latter is then vibrated, the potato chips re-arrange themselves and shake down into a position entirely in the carton. If the ends 11 are then forced in until finally cut 27 engages with cut 19, each of the ends is locked in position with the product in the package. The package can then be wrapped with wax paper, or cellophane or the like, or, if desired, the extent of end section 61 can be such that a complete closure is provided for the top of the package.

In addition to the packaging of potato chips, the carton is readily suited to the packaging of numerous other products in addition to these. Further, it is believed to be obvious that the package can be formed about a previously positioned product. For example, the container is readily formed about a previously positioned mass of butter, weighed out and formed into suitable shape.

By reason of the extensive surfaces in engagement between wing 13 and the side wall 9, as appears in Figures 2 and 3, for example, the container of the present invention is particularly suited to the use of a heat sealing composition, the areas being so extensive that sufficient of this composition can be provided to secure a relatively great degree of adherence between the abutted surfaces. In addition, the container of the present invention is particularly suited to manufacture of a structure in which the end walls extend above for a considerable distance the side walls 9, in this position the end walls having sufficient strength to support additional cartons positioned upon them whereby they can be stacked readily, a matter of considerable advantage in the handling of the containers prior to and after packaging of a commodity therein.

I claim:

1. In a folding box having a bottom, a side wall hingedly connected to said bottom along a side fold line, an end wall hingedly connected to said bottom along an end fold line intersecting said side fold line at the box corner, a top wall hingedly connected to said end wall along a top fold line, an end wall side flap hingedly connected to said end wall, said side flap being foldable into face-to-face position with said side wall, said side wall having a cut side edge at the corner forming an angle with the side fold line equal to the angle which said end panel forms with the main panel in the assembled corner, an improved glueless interlock for maintaining said several walls in box forming position with respect to one another, said interlock being formed by an internal cut of bent outline in said side wall forming an internal tongue in said side wall adapted to be resiliently flexed with respect to the remainder of said side wall, the tip of the internal tongue extending towards the side flap when said side flap is moved into locking position about said bottom fold line, said side flap having an external cut extending into it from an outer edge, said external cut coinciding in interlocking position with a portion of said internal cut in line-to-line, as distnguished from point-to-point, coincidence, said external cut forming an external tongue on said flaps resiliently deflectable with respect to the remainder of said flap, said external tongue being bordered by said external cut and at least an outer edge of said flap, the distance from the end of the external tongue to the point of intersection of said bottom fold line with said end fold line being less than the distance from said point of intersection to the end of the internal cut farthest from the side fold line, said flap being partially insertable through said internal cut by a motion towards said bottom, whereby said external tongue moves under said internal tongue and both tongues resiliently deflect each other with respect to the planes of the flap and wall of which they form a part, respectively, said internal cut and said external cut providing cut edges on the respective wall and flap, portions of which in the position in which said side edge abuts said end wall in edge-to-surface position are in substantial coincidence permitting an edge portion of one cut to engage the coinciding edge portion of the other cut in edge-to-edge as distinguished from point-to-point position, the ends of the cuts lying on opposite sides with respect to the portion of interlock so that one end of the internal cut closest to the portion of interlock lies to one side of said portion of interlock and that the inner end of the other cut lies on the other side of said portion of interlock, said external and internal tongue lying face-to-face and deflecting each other into said edge-to-edge engagement of said cuts, the easily deflectable tip portion of each tongue lying next to the less easily deflected root portion of the other tongue and vice versa, whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to snap into engagement and remain in engaged position thus maintaining the several box walls in box forming position.

2. An improved glueless corner construction for folding boxes for assembling, in corner forming relationship, a main panel, two wall panels hinged to the main panel along fold lines forming an angle and a flap hinged to one of the wall panels along the side of said one wall panel, the flap being foldable over the outside of the other wall panel when the panels are in corner forming position, the other wall panel having a cut side edge at the corner forming an angle with the fold line of said other panel equal to the angle which said one panel forms with the main panel in the assembled corner, the corner construction being further characterized by an interlock comprising, an internal cut of bent outline in said other wall panel forming an internal resilient tongue in said other wall panel pointing towards the box corner when the panels are in corner forming position, the internal tongue, upon flexing with respect to the remainder of said other wall panel, forming a wedge-shaped opening in said other wall panel into which said flap may be swung, said flap having an external cut extending into it from an outer edge, said external cut coinciding in interlocking position with a portion of said internal cut in line-to-line, as distinguished from point-to-point, coincidence, said external cut forming an external tongue on said flap, said external tongue being bordered by said external cut and at least one

outer edge of said flap, the distance from the end of the external tongue to the point of intersection of said fold lines being less than the distance from said point of intersection to the end of said internal cut farthest from the fold line of said other panel, said flap being partially insertable into said wedge-shaped opening through said internal cut by a motion towards said main panel, whereby said external tongue underlies said internal tongue and both tongues resiliently deflect each other, said internal cut and said external cut providing cut edges which, in the position in which said side edge abuts said one wall panel in edge-to-surface position, are in substantial coincidence permitting a coinciding edge portion of one cut to engage an edge portion of the other cut in edge-to-edge as distinguished from point-to-point position, the internal tongue and the external tongue pointing in opposite directions and deflecting each other to produce said edge-to-edge engagement of said coinciding cuts whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to move into engagement and remain in engaged position.

3. An improved glueless corner construction for folding boxes for assembling, in corner forming relationship, a main panel, two wall panels hinged to the main panel along fold lines forming an angle, and a flap hinged to one of the wall panels along the side of said one wall panel, the flap being foldable over the outside of the other wall panel when the panels are in corner forming position, the other wall panel having a cut side edge at the corner forming an angle with the fold line of said other panel equal to the angle which said one panel forms with the main panel in the assembled corner, the corner construction being further characterized by an interlock comprising, an internal cut of bent outline in said other wall panel forming an internal resilient tongue in said other wall panel pointing towards the box corner when the panels are in corner forming position, the internal tongue, upon flexing with respect to the remainder of said other wall panel, forming a wedge shaped opening in said other wall panel into which said flap may be swung, said flap having an external cut extending into it from an outer edge, said external cut coinciding in interlocking position with a portion of said internal cut in line-to-line, as distinguished from point-to-point, coincidence, said external cut forming an external tongue on said flap, the distance from the end of the external tongue to the point of intersection of said fold lines being less than the distance from said point of intersection to the end of said internal cut farthest from the fold line of said other panel, said external tongue pointing in a direction opposite to that of the internal tongue when the panels and flap are in corner forming position, said flap being partially insertable into said wedge-shaped opening through said internal cut by a motion towards said main panel, whereby said external tongue underlies said internal tongue and both tongues resiliently deflect each other, said internal cut and said external cut providing cut edges which, in the position in which said side edge abuts said one wall panel in edge-to-surface position, are in substantial coincidence permitting an edge portion of one cut to engage a coinciding edge portion of the other cut in edge-to-edge, as distinguished from point-to-point, position, the ends of the cuts lying on opposite sides with respect to the portion of edge-to-edge engagement, so that the one end of the internal cut closest to the portion of edge-to-edge engagement lies to one side of said portion of engagement and that the inner end of the external cut lies on the other side of said portion of engagement, said external and said internal tongue lying face-to-face and deflecting each other into edge-to-edge engagement of said coinciding cuts, the easily deflectable tip portion of each tongue lying next to the less easily deflected root portion of the other tongue, and vice versa, whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to move into engagement and remain in engaged position.

4. An improved glueless corner construction for folding boxes for assembling, in corner forming relationship, a main panel, two wall panels hinged to the main panel along fold lines forming an angle, and a flap hinged to one of the wall panels along the side of said one wall panel, the flap being foldable over the outside of the other wall panel when the panels are in corner forming position, the other wall panel having a cut side edge at the corner forming an angle with the fold line of said other panel equal to the angle which said one panel forms with the main panel in the assembled corner, the corner construction being further characterized by an interlock comprising, an internal cut of bent outline in said other wall panel forming a resilient internal tongue in said other wall panel pointing towards the box corner when the panels are in corner forming position, the internal tongue, upon flexing with respect to the remainder of said other wall panel, forming a wedge shaped opening in said other wall panel into which said flap may be swung, said flap having two spaced cuts extending into it from outer edges forming an external tongue thereon resiliently deflectable with respect to the remainder of said flap, said cuts coinciding in interlocking position of the flap and said other wall panel with spaced portions of said internal cut in line-to-line, as distinguished from point-to-point, coincidence, said external tongue being bordered by said two external cuts and by an outer edge of said flap, the distance from the end of the external tongue to the point of intersection of said fold lines being less than the distance from said point of intersection to the end of said internal cut farthest from the fold line of said other panel, said flap being partially insertable into said wedge-shaped opening through said internal cut by a motion towards said main panel, whereby said external tongue underlies said internal tongue and both tongues resiliently deflect each other, said internal cut and said external cuts providing cut edges which, in the position in which said side edge abuts said one wall panel in edge-to-surface position, are in substantial coincidence permitting edge portions of an external cut to engage coinciding edge portions of the internal cut in edge-to-edge, as distinguished from point-to-point, position, the internal tongue and the external tongue pointing in opposite directions and deflecting each other to produce edge-to-edge, as distinguished from point-to-point, engagement of said cuts, whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to move into engagement and remain in engaged position.

5. An improved glueless corner construction for folding boxes for assembling, in corner form-

ing relationship, a main panel, two wall panels hinged to the main panel along fold lines forming an angle, and a flap hinged to one of the wall panels along the side of said one wall panel, the flap being foldable over the outside of the other wall panel when the panels are in corner forming position, the other wall panel having a cut side edge at the corner forming an angle with the fold line of said other panel equal to the angle which said one panel forms with the main panel in the assembled corner, the corner construction being further characterized by an interlock comprising, an internal cut of bent outline in said other wall panel forming a resilient internal tongue in said other wall panel pointing towards the box corner when the panels are in corner forming position, the internal tongue upon flexing with respect to the remainder of said other wall panel, forming a wedge shaped opening in said other wall panel into which said flap may be swung by a motion towards said main panel, said flap having two spaced cuts extending into it forming an external tongue thereon resiliently deflectable with respect to the remainder of said flap, said cuts coinciding in interlocking position of the flap and said other wall panel with spaced portions of said internal cut in line-to-line, as distinguished from point-to-point, coincidence, said external tongue being bordered by said two external cuts and by an outer edge of said flap, said flap being partially insertable into said wedge-shaped opening through said internal cut, the distance from the end of the external tongue to the point of intersection of said fold lines being less than the distance from said point of intersection to the end of said internal cut farthest from the fold line of said other panel, whereby said external tongue underlies said internal tongue and both tongues resiliently deflect each other, said internal cut and said external cuts providing cut edges which, in the position in which said side edge abuts said one wall panel in edge-to-surface position, are in substantial coincidence permitting edge portions of the external cuts to engage coinciding edge portions of the internal cuts in edge-to-edge, as distinguished from point-to-point, position, the ends of the cuts lying on opposite sides with respect to the portion of edge-to-edge engagement, so that the one end of the internal cut closest to the portion of edge-to-edge engagement lies to one side of said portion of engagement and that the inner end of the external cut lies on the other side of said portion of engagement, said external and said internal tongue lying face-to-face and deflecting each other into edge-to-edge, as distinguished from point-to-point, engagement of said cuts, the easily deflectable tip portion of each tongue lying next to the less easily deflected root portion of the other tongue, and vice versa, whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to move into engagement and remain in engaged position.

6. An improved glueless corner construction for folding boxes for assembling, in corner forming relationship, a main panel, two wall panels hinged to the main panel along fold lines forming an angle, and a flap hinged to one of the wall panels along the side of said one wall panel, the flap being foldable over the outside of the other wall panel when the panels are in corner forming position, the other wall panel having a cut side edge at the corner forming an angle with the fold line of said other panel equal to the angle which said one panel forms with the main panel in the assembled corner, the corner construction being further characterized by an interlock comprising, an internal cut of bent outline in said other wall panel, one end of said internal cut terminating at the fold line at which said other wall panel joins said main panel, said internal cut forming a resilient internal tongue in said other wall panel pointing towards the box corner when the panels are in corner forming position, the internal tongue, upon flexing with respect to the remainder of said other wall panel, forming a wedge shaped opening in said other wall panel into which said flap may be swung, said flap having at least one external cut extending into said flap from an outer edge, said external cut coinciding in interlocking position with a portion of said internal cut in line-to-line, as distinguished from point-to-point, coincidence, said external cut forming an external tongue on said flap, said external tongue being bordered by said external cut and at least one outer edge of said flap, the distance from the end of the external tongue to the point of intersection of said fold lines being less than the distance from said point of intersection to the end of said internal cut farthest from the fold line of said other panel, said flap being partially insertable into said wedge-shaped opening through said internal cut by a motion towards said main panel, whereby said external tongue underlies said internal tongue and both tongues resiliently deflect each other, said internal cut and said external cut providing cut edges which, in the position in which said side edge abuts said one wall panel in edge-to-surface position, are in substantial coincidence permitting an edge portion of one cut to engage a coinciding edge portion of the other cut in edge-to-edge, as distinguished from point-to-point, position, the internal tongue and the external tongue pointing in opposite directions and deflecting each other to produce said edge-to-edge engagement of said coinciding cuts whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to move into engagement and remain in engaged position.

7. An improved glueless corner construction for folding boxes for assembling, in corner forming relationship, a main panel, two wall panels hinged to the main panel along fold lines forming an angle, and a flap hinged to one of the wall panels along the side of said one wall panel, the flap being foldable over the outside of the other wall panel when the panels are in corner forming position, the other wall panel having a cut side edge at the corner forming an angle with the fold line of said other panel equal to the angle which said one panel forms with the main panel in the assembled corner, the corner construction being further characterized by an interlock comprising, an internal cut of bent outline in said other wall panel, said internal cut having a first portion extending adjacent and substantially parallel to, but spaced from, the fold line of said other wall panel, a second portion substantially normal to the first portion, and a third portion extending at an angle with respect to the second portion, said internal cut forming a resilient internal tongue in said other wall panel pointing towards the box corner when the panels are in corner forming position, the internal tongue, upon flexing with respect to the remainder of said other wall panel, forming a wedge shaped opening in said other wall panel

into which said flap may be swung, said flap having at least one external cut extending into said flap from an outer edge, said external cut coinciding in interlocking position with the said third portion of the internal cut in line-to-line, as distinguished from point-to-point, coincidence, said external cut forming an external tongue on said flap oppositely directed with respect to said internal tongue in interlocking position, said external tongue being bordered by said external cut and at least one outer edge of said flap, the distance from the end of the external tongue to the point of intersection of said fold lines being less than the distance from said point of intersection to the end of said internal cut farthest from the fold line of said other panel, said flap being partially insertable into said wedge-shaped opening through said internal cut by a motion towards said main panel, whereby said external tongue underlies said internal tongue and both tongues resiliently deflect each other in the position in which said side edge abuts

said one wall panel in edge-to-surface position, to urge their respective edges into coincidence along said third portion, whereby the inherent stiffness of the stock is utilized in assisting the respective edges automatically to move into engagement and remain in engaged position.

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