

March 3, 1953

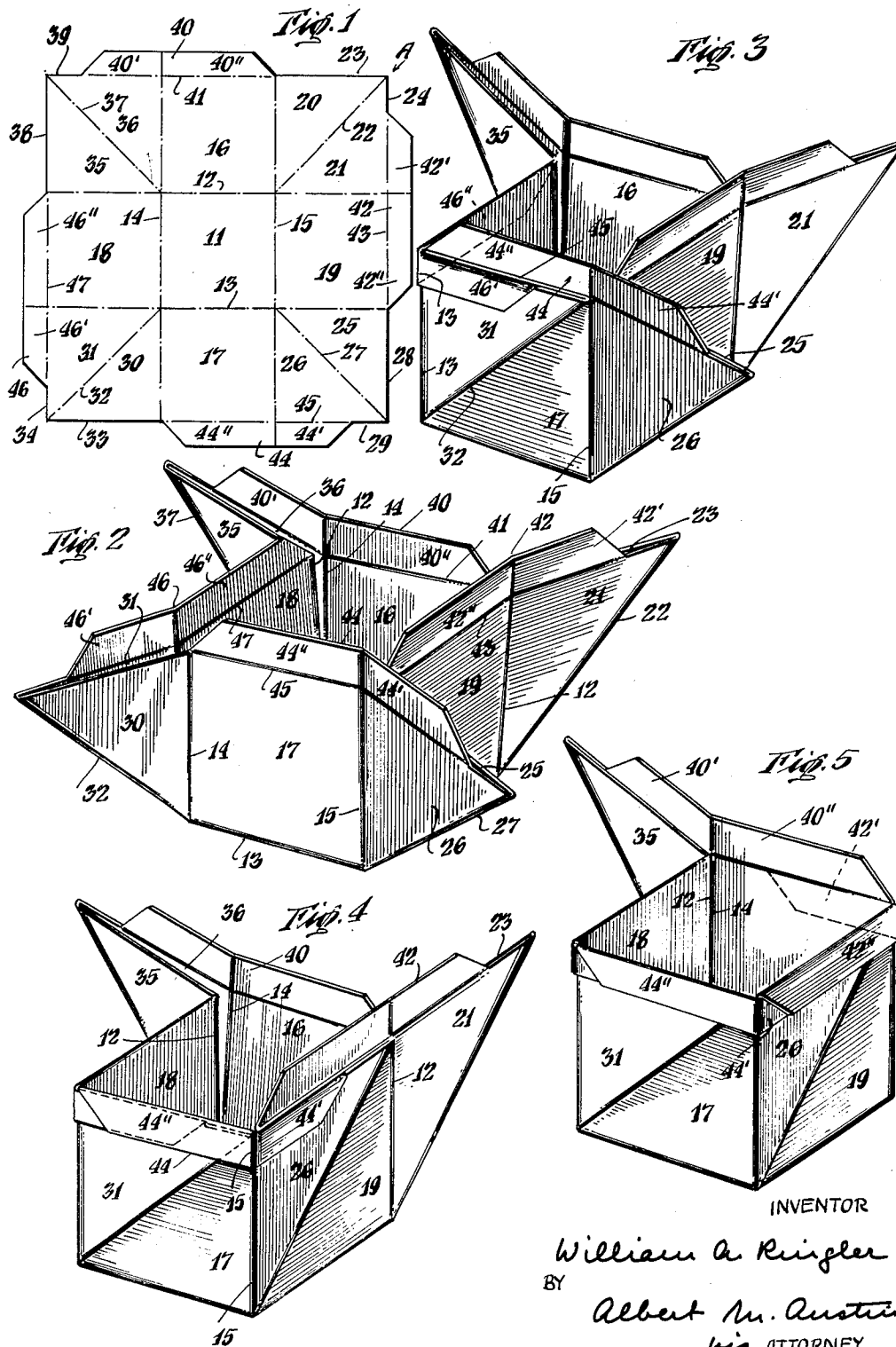
W. A. RINGLER

2,630,263

CONTAINER

Filed Aug. 31, 1945

3 Sheets-Sheet 1



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William A. Ringler
BY
Albert M. Austin
his ATTORNEY

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3 Sheets-Sheet 2

Fig. 6

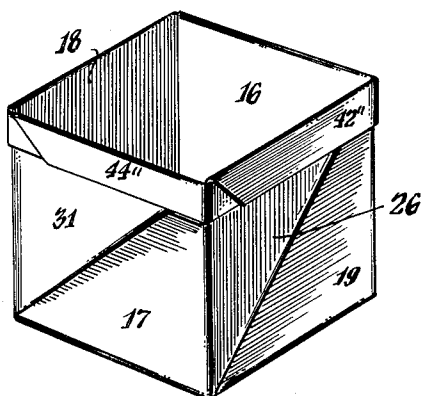


Fig. 7

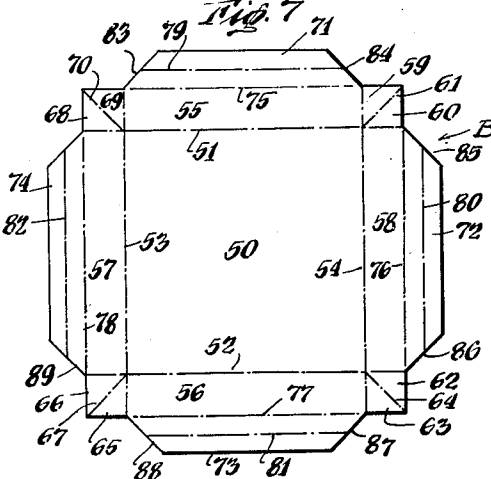


Fig. 8

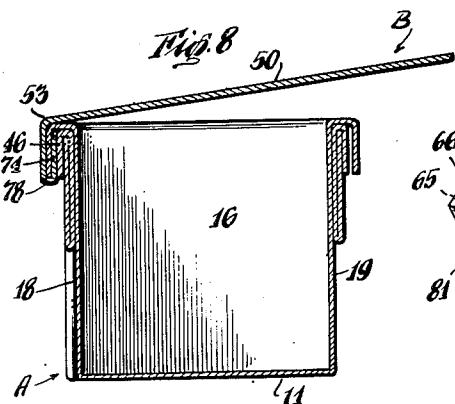


Fig. 9

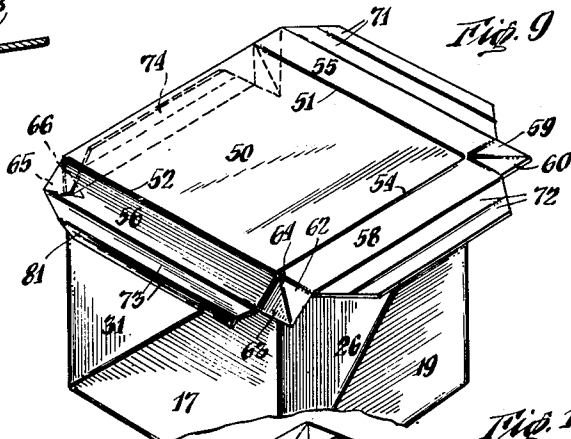


Fig. 10

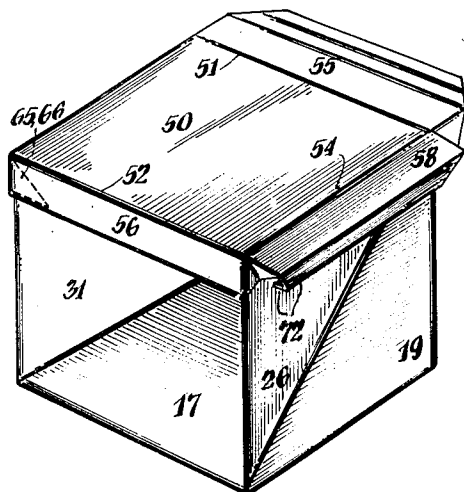
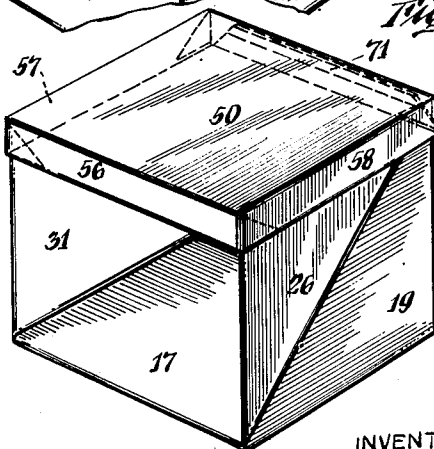


Fig. 11



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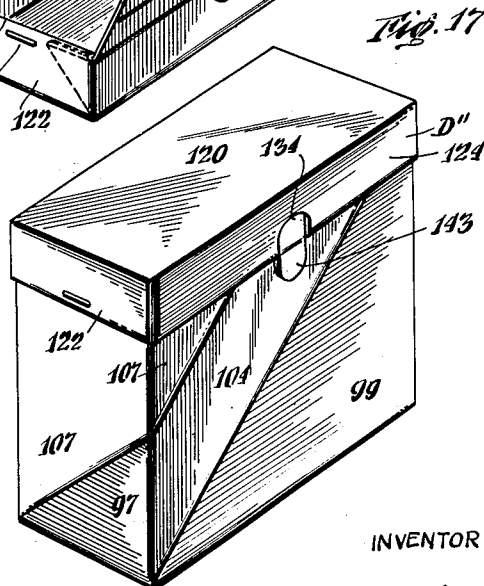
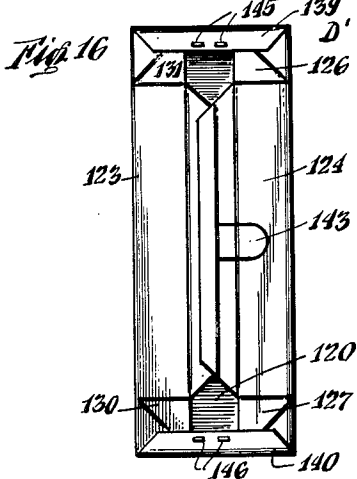
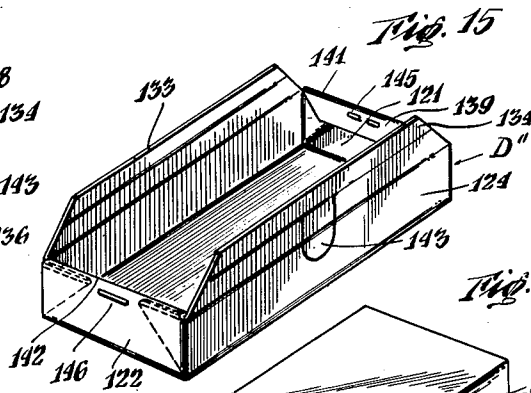
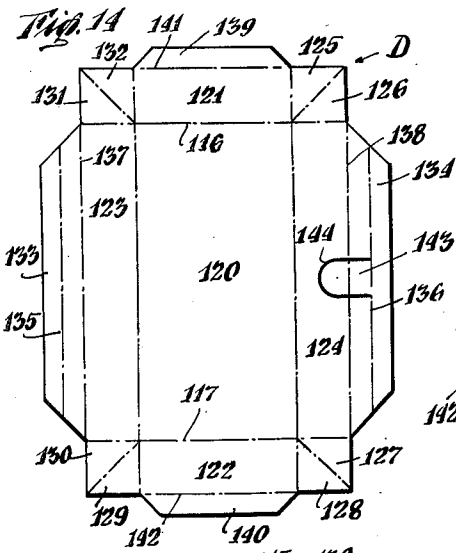
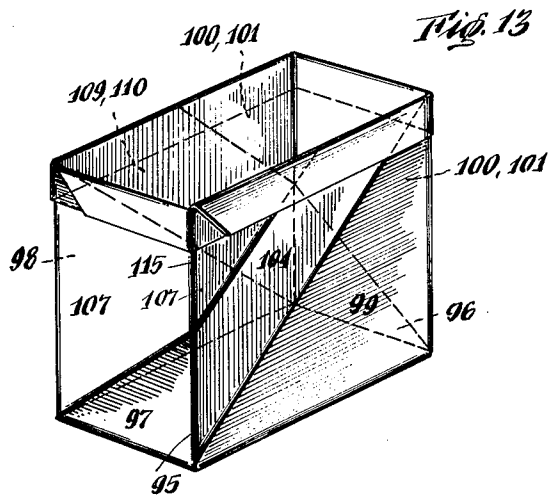
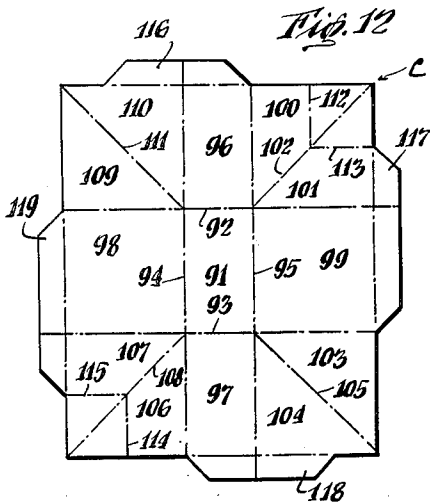
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W. A. RINGLER
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,630,263

CONTAINER

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Application August 31, 1945, Serial No. 613,843

6 Claims. (Cl. 229—31)

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This invention provides a liquid tight carton or container of the knock-down type made from cardboard, paperboard or other suitable foldable sheet material.

Cartons or containers embodying the invention may be prefabricated in the form of flat, cut and creased blanks and may be assembled either manually or on automatic equipment by extremely simple assembly operations.

The carton is entirely self-locking and does not require gluing, stapling or riveting operations to maintain it in set-up condition.

A representative form of carton made according to the invention briefly comprises a bottom to which side walls are hingedly connected along fold lines forming the bottom edges of the carton. The side walls are interconnected by pairs of bellows or gusset panels hingedly connected to the side edges of the side walls, whereby liquid proofness of the container is attained. The gusset panels are folded face to face and overlie the side walls adding materially to the strength of the walls. Lock flaps hingedly connected along the top edge of the carton overlie the folded gusset panels and hold them in carton assembled position. The lock flaps are secured in folded over position by their unique construction and arrangement, each lock flap being hingedly connected to two panels meeting at a corner of the carton. Each lock flap thus extends around a corner of the carton and resists folding up into a position in which the gusset panels would be released. The lock flaps in addition to maintaining the container in assembled position, reinforce the top edge of the container and provide a rim to which various forms of covers may be connected or locked.

Cartons and containers according to the present invention are admirably suited for the packaging of frozen foods, ice cream and the like, particularly since they may be shipped and stored in collapsed condition, be set up when needed, and may be knocked down and flattened out for disposal after use without necessity of tearing of container panels, pulling of staples or other time consuming or inconvenient operations.

The various objects, features and advantages of the invention will appear more fully from the detailed description which follows, accompanied by drawings showing, for the purpose of illustration, preferred embodiments of the invention. The invention also consists in certain new and original features of construction and combination of parts hereinafter set forth and claimed.

Although the characteristic features of the invention which are believed to be novel will be particularly pointed out in the claims appended hereto, the invention itself, its objects and advantages and the manner in which it may be carried out may be better understood by referring

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to the following detailed description and the accompanying drawings forming a part thereof, in which:

Fig. 1 is a plan view of a flat carton blank from which a carton embodying features of this invention may be made, the inside surface of the blank facing the observer;

Fig. 2 is a perspective illustration showing the blank of Fig. 1 after an initial folding operation in which the gusset panels at the side edges of the container are brought into face to face position;

Fig. 3 illustrates the folding of a first securing flap and the folding of a first pair of gusset panels;

Fig. 4 illustrates the folding of a second securing flap which holds the first pair of gusset panels in position and the folding of a second pair of gusset panels;

Fig. 5 illustrates a further step in the progressive assembly of the container, the folding of a third securing flap to lock the second pair of gusset panels and the folding of the third pair of gusset panels into side wall overlying position;

Fig. 6 shows the completed container after folding of the last securing flap which holds the third pair of gusset panels in place and the position of the last pair of gusset panels underneath the first folded securing flap;

Fig. 7 is a plan view of a flat blank from which a cover for the carton of Fig. 6 may be formed;

Fig. 8 is a vertical cross section illustrating a first step in the assembly of a cover blank with the completed container;

Figs. 9 to 11 are perspective views illustrating progressive steps in the assembly and securing of the cover, Fig. 11 illustrating the completed closed container;

Fig. 12 is a plan view of a flat carton blank from which a carton having a rectangular instead of a square bottom panel may be formed;

Fig. 13 is a perspective view of the completed container made from the blank of Fig. 12;

Fig. 14 is a plan view of a flat blank from which a modified form of cover may be made;

Fig. 15 is a perspective view of the completed cover made from the blank of Fig. 14;

Fig. 16 shows the assembled cover of Fig. 15 in flat collapsed condition; and

Fig. 17 is a perspective view showing the cover of Fig. 15 on the container of Fig. 13.

In the following description and in the claims various details will be identified by specific names for convenience. These names, however, are intended to be as generic in their application as the art will permit. Like reference characters refer to like parts in the several figures of the drawings.

In the drawings accompanying, and forming part of, this specification, certain specific disclosure of the invention is made for the purpose

of explanation, but it is understood that details may be modified in various respects without departure from the broad aspect of the invention.

The blank A shown in Fig. 1 is substantially square in outline resulting in a minimum of waste of material. The blank may be cut and scored from a large sheet or roll of paperboard or other suitable foldable material on an automatic cutting and scoring machine. Only one side of the blank need be coated or otherwise treated to attain liquid resistance of the stock and only one side of the blank need be decoratively finished or imprinted since one surface of the blank forms the interior surface of the assembled container and the reverse surface forms the outside.

Fig. 1 shows the blank A in a position in which the inside surface faces the observer. The blank comprises a bottom panel 11 bounded by fold lines 12, 13 and 14 and 15 forming bottom edges in the completed carton. The fold lines 12, 13, 14 and 15 intersect at the four corners of the bottom panel and extend beyond the corners to the outer edges of the blank. Side wall panels 16, 17, 18 and 19 are hingedly connected to the bottom panel 11 along the fold lines 12, 13, 14 and 15, respectively. The fold lines 12, 13, 14 and 15 bound the side wall panels at the sides and form side edges in the finished container.

A pair of gusset panels 20 and 21 connected along a diagonal fold line 22 are hingedly secured to the side wall panels 16 and 19 along the fold lines 15 and 12, respectively. The gusset panel 20 has a free outer edge 23 and the gusset panel 21 has a cut outer edge 24 of limited length.

A pair of gusset panels 25 and 26 connected along a diagonal fold line 27 are hingedly secured to the side panels 18 and 17 along the fold lines 13 and 15, respectively. The gusset panel 25 has the free outer edge 28 and the gusset panel 26 has a cut edge 29 of a limited extent.

A third pair of gusset panels 30 and 31 interconnected along a diagonal fold line 32 is hingedly connected to the side panels 17 and 18 along the fold lines 14 and 13. The gusset panel 30 has a free outer edge 33 and the gusset panel 31 has a cut edge 34 of limited length.

A fourth pair of gusset panels 35 and 36 interconnected along a diagonal fold line 37 is hingedly secured to the side panels 18 and 16 along the fold lines 12 and 14, respectively. The gusset panel 35 has a free edge 38 and the gusset panel 36 has a relatively short cut edge 39.

A joint lock flap 40 common to both the gusset panel 36 and the side wall panel 16 is hingedly connected to the two panels along a top fold line 41 which may be in alignment with the cut edges 39 and 23 or may be slightly spaced therefrom but parallel thereto in order to accommodate two thicknesses of gusset panels in the assembled container. The lock flap 40 is subdivided by a fold line 44 into a portion 44' hinged to the gusset panel 36 and a portion 44'' hinged to the side wall panel 16.

A similar joint lock flap 42 common to the gusset panel 21 and the side wall panel 19 is hingedly connected thereto along a top fold line 43. The lock flap 42 is subdivided into portions 42' and 42'' by the fold line 12 extending thereacross.

A further joint lock flap 44 common to the gusset panel 26 and to the side wall panel 17 is hingedly connected thereto along a top fold line 45. The lock flap 44 is subdivided into portions 44' and 44'' by the fold line 15 extending thereacross.

The corresponding lock flap 46 subdivided by the fold line 13 into portions 46' and 46'' is hingedly connected to both the gusset panel 31 and the adjoining side wall panel 18.

The blank A as shown in Fig. 1 is ready for assembly into hollow container form by simple folding operations without the necessity of gluing, stapling or otherwise mechanically adhering the panels together. The blank may be stored and shipped in flat condition or it may be folded twice along parallel fold lines, for example, along fold lines 12 and 13, or about fold lines 14 and 15 so that the side wall panels to either side of the fold lines overlie the top surface and the bottom surface of the bottom panel 11, respectively. Thus folded, the blank is reduced to approximately one-third of its width, which is convenient where a saving of space is of importance.

The blank A may be formed and folded into hollow container form either manually or on simple semi-automatic equipment, as follows: The four side wall panels 16, 17, 18 and 19 are folded about the bottom fold lines 12, 13, 14 and 15 to a position substantially at right angles with respect to the bottom panel 11. The folding of the side wall panels automatically causes the pairs of gusset panels to fold about their respective diagonal score lines into face to face position. Thus the inside surface of the gusset panel 35 comes face to face with the inside surface of the gusset panel 36, and the gusset panels at the other three side edges of the container are folded in like manner. The structure resulting from these folding operations is shown in Fig. 2 and is ready for the folding and securing of the folded gusset panels in locking position.

The locking of the four pairs of gusset panels is preferably done progressively, and may proceed as follows:

The side wall panel 18 and the gusset panel 31 are first aligned in order to straighten the fold line 47 along which the lock flap 46 is hinged. The lock flap 46 is then folded outwardly about the fold line 47 to overlie the top portion of the side wall panel 18 and of the gusset panel 31. The pair of gusset panels 30 and 31 lying face to face is then swung about the fold lines 13 and 14 lying in substantial alignment until the pair of gusset panels overlies the outside surface of the side wall panel 17. This position is illustrated in Fig. 3. In the resulting structure the side wall nearest to the observer is of single thickness where the side wall panel 17 is exposed and of triple thickness where the pair of gusset panels 30 and 31 overlie the side wall panel 17. The result is in a reinforced side wall which is extremely sturdy.

After the folding of the gusset panels 30 and 31 over the side wall panel 17 the two portions 46' and 46'' of the lock flap have assumed an angular position with respect to each other which prevents upfolding of the sections 46' and 46''.

The assembly of the container then proceeds by moving the pair of gusset panels 25 and 26 about the side foldline 15 into alignment with the side wall panel 17 as illustrated in Fig. 3. In this position the sections of the top fold line 45 along which the lock flap portions 44' and 44'' are hinged are aligned permitting folding of the entire lock flap 44 outwardly so that lock flap portion 44'' overlies lock flap portion 46' on the previously folded gusset panel 31 and lock flap portion 44' overlies the outside surface of the gusset panel 26. The folded gusset panels 26 and 25 are then swung about the fold line 15 forming

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panel overlies the narrow side wall panels 96 and 97, whereas the tip portions of the pairs of triangular panels are folded again to overlie the pairs of gusset panels folded over the wide side walls.

The assembled container is shown in Fig. 13. The narrow side wall panel 97 nearest to the observer is reinforced by the major portion of the gusset panels 106 and 107 with panel 107 lying outermost. The tip portion of the gusset portion 106 and 107 overlie the outside surface of the gusset panel 104 which forms a pair with the gusset panel 103. The large side wall 99 of the container is thus doubly reinforced by the gusset panels 103 and 104 extending diagonally across the side wall 99 and by the tip portion of the gusset panels 106 and 107 extending across a corner of the gusset panels 103 and 104.

The opposite narrow side wall 98 of the container is reinforced by the gusset panels 109 and 101 whose tip portion overlies the gusset panel 109 and 110 reinforcing the large side wall 98.

The container of Fig. 13 may be closed by a cover similar to that illustrated in Figs. 7 to 11 having a top panel of appropriate rectangular outline.

However, covers may also be preassembled to simplify the operations of attaching the cover to the container. Such a cover will now be described.

The blank D corresponds in outline to the cover blank B of Fig. 7 with the exception that only two tuck flaps are provided in opposite sides of the blank, the remaining two flaps being shortened to form securing flaps. The blank D is subdivided by fold lines 116 and 117, 118 and 119 into a top panel 120, narrow side flange panels 121 and 122, wide side flange panels 123 and 124 and pairs of gusset panels 125 and 126, 127 and 128, 129 and 130, and 131 and 132. Tuck flaps 133 and 134 subdivided by fold lines 135 and 136 are hingedly connected to the side flange panels 123 and 124 along fold lines 137 and 138. Securing flaps 139 and 140 are hingedly connected to the narrow side flange panels 121, 122 along fold lines 141 and 142.

A pull tab 143 is cut from the body of the tuck flap 134 and of the side flange panel 124 by a cut line 144, terminating at the fold line 136 about which the pull tab is hinged.

The setting up of the cover from the blank D proceeds by folding of the narrow and the wide side flange panels about their respective fold lines into a position at right angles with respect to the top panel 120. Substantially simultaneously the pairs of gusset panels at the four corners of the blank are folded face to face and over the inside surface of the narrow side flange panels 121 and 122. The securing flaps 139 and 140 are then folded about their respective fold lines 141 and 142 to overlie the folded gusset panels and lock the same in place. The securing flaps 139 and 140 are then secured to the side flange panels 121 and 122 by staples 145 and 146 or the like.

The assembled and stapled cover of Fig. 15 may be collapsed by pulling the narrow side flange panels 121 and 122 outwardly, whereby a collapsed flat structure D' is formed illustrated in Fig. 16. In the collapsing of the cover the gusset panels 126, 127, 130 and 131 slide from underneath the securing flaps 139 and 140 which are resilient by reason of being stapled approximately at the center.

The collapsed flat cover D' requires a minimum

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of space for storage and shipment and may easily be set up simply by tucking the unlatched gusset panels 126, 127, 130 and 131 back under the ends of the respective securing flaps 139, 140.

The set up cover D' may be attached to the container of Fig. 13 by first inserting the tuck flap 133 underneath the rim of one wide container side panel. The cover is then telescoped over the top of the container and secured by tucking the opposite tuck flap 134 underneath the rim on the other wide side wall panel.

After securing of the cover D' to the container the pull tab 143 extends downwardly from the tuck flap 134. The cover may be removed simply by pulling the tab 143 downwardly, whereby tuck flap 134 is pulled out from underneath the container rim, and by then pulling the flap upwardly, whereby the cover D' is removed from the container top.

A similar pull tab may of course be provided on any of the four tuck flaps of the cover made from blank B and illustrated in Figs. 7 to 11. It will operate in the same manner as described in connection with the reassembled cover D'.

The invention thus provides a liquid tight container of extremely simple and rugged construction which may be set up, filled and closed either manually by unskilled operators or be handled on automatic or semi-automatic equipment. The container is very sturdy due to the reinforcement of the side walls and the top edge. It possesses the advantage of being easily knocked down after use.

No glue or staples are required for assembling the container which is entirely self-locking due to its peculiar construction. The container may be produced in convenient multiple size series, for example, as 2½, 5 and 10 gallon containers which are easily packed and stocked due to the fact that the container of next smaller size has only one dimension reduced, for example, the width of one side wall.

The invention of course is not limited to the specific forms of blanks illustrated in the drawings. The blanks may be modified in various ways without changing the principal features of the construction. Cartons having more than four side walls may be constructed in accordance with the invention. In Fig. 1 cut edges 24, 29, 34 and 39 are provided on the gusset panels 21, 26, 31, and 36. The lock flaps 42', 44', 46' and 48' may of course be extended to the corners of the blanks to eliminate the cut edges without detracting from the advantages of the blank. Also the lock flaps identified by several primed reference numerals may be shortened somewhat.

Containers may of course be constructed in which each side wall is reinforced by more than one pair of gusset panels folded thereover, as it is the case with the narrow side wall panels 96 and 97 of the container of Fig. 13. All that is required to produce such a container is a narrowing of the side wall panels 98 and 99 of Fig. 12 and the provision of additional fold lines similar to lines 112 and 113 across the other two pairs of gusset panels. The result is a tall container of extreme rigidity.

These and various other modifications of the blank as well as numerous other changes, additions, omissions and substitutions may be made by persons skilled in the art without departing from the spirit and teaching of the invention.

What is claimed is:

1. In a carton a first, a second and a third wall panel extending at angles with respect to each

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a side edge of the container into a position in which the folded gusset panels 25 and 26 overlie the side wall panel 19. This folding operation causes folding of the two portions of the lock flap 44 about the fold line 15 whereby the portion 44'' overlying the gusset panels 30 and 31 is fixed in position.

In the further stages of the assembly the gusset panels 23 and 21 are aligned with the side wall panel 19, the lock flap 42 common to the side wall panel 19 and the gusset panel 21 is folded outwardly to overlie the last folded pair of gusset panels 26 and 25, locking the gusset panels in position. The gusset panels 21 and 23 are then swung about the fold line 12 forming a side edge of the container until the gusset panels 21 and 23 overlie the side wall 16.

The lock flap 40 common to the side wall panel 16 and the gusset panel 36 is then folded outwardly to overlie and lock the last folded pair of gusset panels 21 and 23. The gusset panels 35 and 36 are then swung about the aligned fold lines 12 and 14 until they overlie the side wall panel 18. Finally the folded gusset panels 35 and 36 are tucked under the lock flap 45'' where- by the assembly of the container is completed.

The finished container is shown in Fig. 6. It has a square bottom panel and four side walls reinforced by pairs of gusset panels. Each pair of gusset panels is locked by lock flaps which in addition reinforce the top edge of the container and provide a locking rim to which a cover of suitable construction may be secured.

The container may be knocked down simply by pulling any of the four folded gusset panels from underneath its locking flap, whereafter the container may be flattened out progressively.

A suitable form of blank for forming a cover for the container in Fig. 6 is shown in Fig. 7.

Blank B comprises a top panel 50 bounded by fold lines 51, 52, 53 and 54 forming top edges in the completed cover. Flange panels 55, 56, 57 and 58 are hingedly connected to the top panel 50 along the top fold lines 51, 52, 53 and 54 respectively. The cover flange panels are interconnected at their ends by pairs of gusset panels. A pair of gusset panels 59 and 60 hinged along a diagonal fold line 61 connects flange panels 55 and 58. A pair of gusset panels 62 and 63 hinged along a diagonal fold line 64 connects flange panels 56 and 56. Further pairs of gusset panels 65, 66 and 68, 69 connected along diagonal fold lines 67 and 70, respectively, lie at either end of the flange panel 57 and connect it with the flange panels 56 and 55, respectively.

Tuck flaps 71, 72, 73 and 74 are hingedly connected to the flange panels 55, 58, 56 and 57 along fold lines 75, 76, 77 and 78, respectively. Each tuck flap is preferably subdivided into two relatively narrow portions by fold lines 79, 80, 81 and 82, respectively, running lengthwise of the tuck flaps. The side edges of the tuck flaps are preferably cut at an angle as shown at 83, 84, 85, 86, 87, 88, 89 and 90.

A cover made from the blank B may be attached to and assembled on the container of Fig. 6 as follows: The tuck flap 74 of the cover is first tucked under the rim of the container formed in part by the tuck flap 46''. The blank is then folded about the fold lines 78 and 53 so that the flange panel 57 overlies the outside of the container rim as shown in Fig. 8. The top panel 50 is then placed over the top of the container as illustrated in Fig. 9 and the sections

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of the tuck flap 73 are tucked under the rim of the container formed in part by the lock flap 44''. While the tuck flap 73 is being tucked underneath the container rim, the gusset panels 65 and 66 are folded about their common fold line 67 and folded underneath the flange panel 66 which overlies the rim of the container. The tucking in of the tuck flap 73 is facilitated due to its subdivision into two narrow sections by the fold line 81.

Thereafter the gusset panels 62 and 63 are folded about their common score line 64 and folded under the flange panel 58 which is then folded downwardly about its score line 54 to overlie the rim of the container formed in part by the lock flap 42''. The flange panel 58 is then secured in position by the lock flap 72 which is tucked underneath the container rim. Fig. 10 illustrates the stage of assembly of the top at which the tuck flap 72 is being tucked under the rim of the container.

The assembly of the cover and the closure of the container is finally completed by downfolding of flange panel 55 about its fold line 51. Substantially simultaneously the gusset panels at either end of the flange panel 55 are folded underneath it and the flange panel is then secured in position by tucking of the lock flap 71 underneath the container rim formed in part by the lock flap 40''.

The closed container with completed cover is shown in Fig. 11. It holds its cover securely for shipment and may be opened conveniently without any tools by pulling out any one of the four tuck flaps from underneath the rim of the container, whereafter the cover may be removed in a manner corresponding its assembly.

The invention is not limited to containers of polygonal or square bottoms. Figs. 12 and 13 illustrate the application of the invention to a container whose bottom panel is rectangular. The bottom panel 91 of the blank C is bounded by fold lines 92, 93, 94 and 95 along which side wall panels 96, 97, 98 and 99 are hingedly connected. The side wall panels are connected by pairs of gusset panels hinged to their respective side edges. Gusset panels 100 and 101 hinged along a common diagonal fold line 102 connect side wall panels 96 and 99. Similar pairs of gusset panels 103 and 104, 106 and 107, 109 and 110, hinged along diagonal fold lines 105, 108 and 111 respectively, connect the side wall panels 99 and 97, 97 and 98, 98 and 96, respectively.

The gusset panels 100 and 101 are further creased along fold lines 112 and 113 extending parallel to fold lines 95 and 92, respectively. The distance between the fold lines 95 and 112 and the fold lines 92 and 113 is equal to, or slightly larger than, the width of the narrow side wall panel 96. A similar pair of additional fold lines 114 and 115 run across the gusset panels 106 and 107.

Lock flaps 116, 117, 118 and 119 are hingedly connected to the panels 110 and 96, 101 and 99, 104 and 97, and 107 and 98, respectively. Each lock flap is common to two panels which in the completed carton form an angle with respect to each other.

The assembly of a container from the blank C proceeds in accordance with the assembly of the square container of Fig. 6 from the blank A of Fig. 1. The only distinction in the assembly is the double folding of the pair of gusset panels 100 and 101 and the pair of gusset panels 105 and 107 so that the major portion of the gusset

other and forming two corners of said carton, pairs of gusset panels hingedly connecting the sides of the first and second and the second and third wall panels respectively, a first joint lock flap hingedly articulated to the top edges of the first wall panel and the adjacent gusset panel of the first pair of gussets, and a second joint lock flap hingedly articulated to the top edges of the second wall panel and the adjacent gusset panel of the other pair of gusset panels, the portions of said lock flaps articulated to said side walls extending substantially throughout the length of said side walls, said pairs of gusset panels each folded to overlie said second and third wall panels respectively, said first joint lock flap being folded outwardly and downwardly over said first side wall and extending around the side edge of the carton between said first and second wall panels with the portion of the lock flap articulated to said first mentioned gusset panel overlying its articulated gusset panel and said second side wall, said second lock flap being folded outwardly and downwardly over the gusset articulated portion of said first joint lock flap, said first mentioned folded gusset panel and said second side wall, with the portion of said second lock flap articulated to said other adjacent gusset panel extending around the side edge of the carton between said second and third side walls and overlying its articulated gusset panel and said third side wall.

2. A polygonal liquid tight container made from a single sheet of stock and consisting of a bottom panel, side wall panels hingedly connected to said bottom panels, pairs of gusset panels hingedly connected to adjoining side wall panels along side fold lines, a joint lock flap hingedly connected to the top edge of each side wall panel and to an adjoining gusset panel at one end of each side wall panel, there being but one portion of a joint lock flap connected to the gusset panels of each pair of gusset panels, the portions of said lock flaps articulated to said side wall panels extending substantially throughout the lengths of said side walls, said pairs of gusset panels each folded to overlie a different side wall of the container with the gusset panels of each pair to which a portion of a lock flap is hingedly connected outermost, said joint lock flaps being folded outwardly and downwardly over the walls to which they are connected and extending around the side edges of the container with the portions of the lock flaps articulated to the adjacent gusset panels overlying the gusset panels to which they are articulated, the other gusset panels of said pairs and the side walls which the folded pairs of gusset panels overlie, said pairs of gusset panels and said joint lock flaps being so folded that the portion of each lock flap articulated to a side wall also overlies the folded over pair of gusset panels lying along that side wall and the folded over portion of the lock flap articulated to the outermost one of the said last mentioned pair of gussets.

3. The structure claimed in claim 2 wherein said bottom panel is square, and there are four side wall panels hingedly connected to the bottom panel and four pairs of hinged gusset panels.

4. The structure claimed in claim 2 wherein said bottom panel is rectangular, and there are two narrow and two wide side wall panels hingedly connected to the bottom panels, and wherein the pairs of gusset panels overlying the narrow side wall panels are additionally folded about the far side fold lines of said narrow panels

so as partly to overlie the pairs of folded gusset panels overlying the succeeding wide side wall panels, the lock flaps hingedly connected to the wide side wall panels additionally overlying folded over portions of the pairs of gusset panels initially overlying said narrow panels.

5. A liquid tight covered container comprising, in combination, a container body and a container top attached thereto, said container body consisting of a bottom panel, side wall panels hingedly connected to said bottom panel, pairs of gusset panels hingedly connected to adjoining side wall panels along side fold lines, a joint lock flap hingedly connected to the top edge of each side wall panel and to an adjoining gusset panel at one end of each side wall panel, there being but one portion of a joint lock flap connected to the gusset panels of each pair of gusset panels, the portions of said lock flaps articulated to said side wall panels extending substantially throughout the length of said side walls, said pairs of gusset panels each folded to overlie a different side wall of the container with the gusset panel of each pair to which a portion of a lock flap is hingedly connected outermost, said joint lock flaps being folded outwardly and downwardly over the walls to which they are connected and extending around the side edges of the container with the portions of the lock flaps articulated to the adjacent gusset panels overlying the gusset panels to which they are articulated, the other gusset panels of said pairs and the side walls which the folded pairs of gusset panels overlie, said pairs of gusset panels and said joint lock flaps being so folded that the portion of each lock flap articulated to a side wall also overlies the folded over pair of gusset panels lying along that side wall and the folded over portion of the lock flap articulated to the outermost one of the said last mentioned pair of gussets, said container top comprising, a top panel, side flange panels hinged to said top panel, and tuck flaps hinged to at least two opposite flange panels and tucked under said lock flaps of the container body.

6. The structure claimed in claim 5 wherein said container top includes a pull tab cut from the body of one of the side flange panels and the tuck flap attached thereto, said pull tab being hingedly connected to said last named tuck flap.

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