United States Patent

Koehler

[15] **3,661,319**

[45] **May 9, 1972**

[54] EXPANSIBLE AND COLLAPSIBLE MULTI-SIDED STRUCTURES AND BLANKS THEREFOR

[72] Inventor: **Albert O. Koehler**, 1217 Durham Road, Riegelsville, Pa. 18077

[22] Filed: **Mar. 2, 1970**

[21] Appl. No.: **15,624**

[52] **U.S. Cl.** .....**229/37**, 229/41 B, 229/41 C

[51] **Int. Cl.** **B65d 5/02**, B65d 5/36

[58] **Field of Search** .....229/8, 22, 37, 41 B, 41 C

[56] **References Cited**

UNITED STATES PATENTS

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Primary Examiner—Edward A. Sroka
Attorney—Bacon & Thomas

[57] **ABSTRACT**

Multi-sided containers having side walls and a bottom wall, formed from a stamped or di-cut integral blank and characterized by having, in certain embodiments of the invention, horizontally projecting feet extending from the bottom wall that serve as stabilizers for the structures. The feet may be defined in part by a lock-slot providing a tab that can be folded upwardly to retain the structure in expanded, although collapsible condition. Alternatively, the lock-slot can be omitted and the feet folded from a horizontal into an upright position and secured to the confronting side wall to provide a permanently erected or expanded structure. In all embodiments of the invention, the blanks are designed so that the bottom wall is collapsible inwardly and upwardly and may be formed by a single bottom section, or by two similar cooperating bottom sections.

31 Claims, 64 Drawing Figures

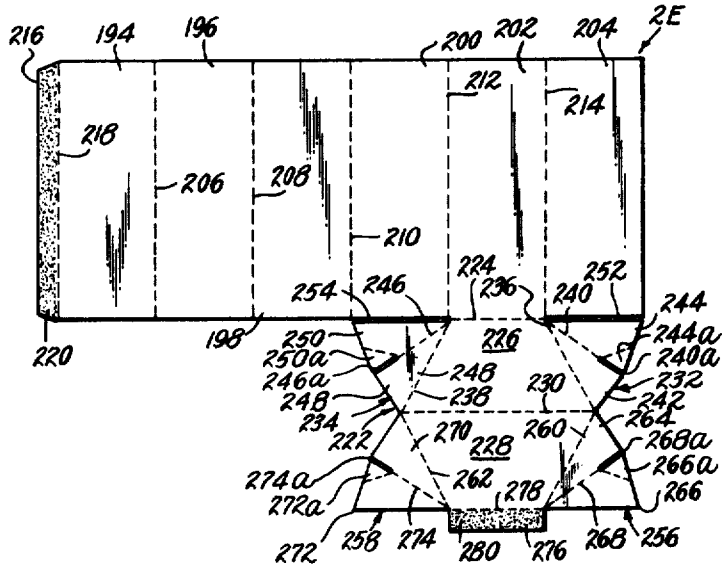


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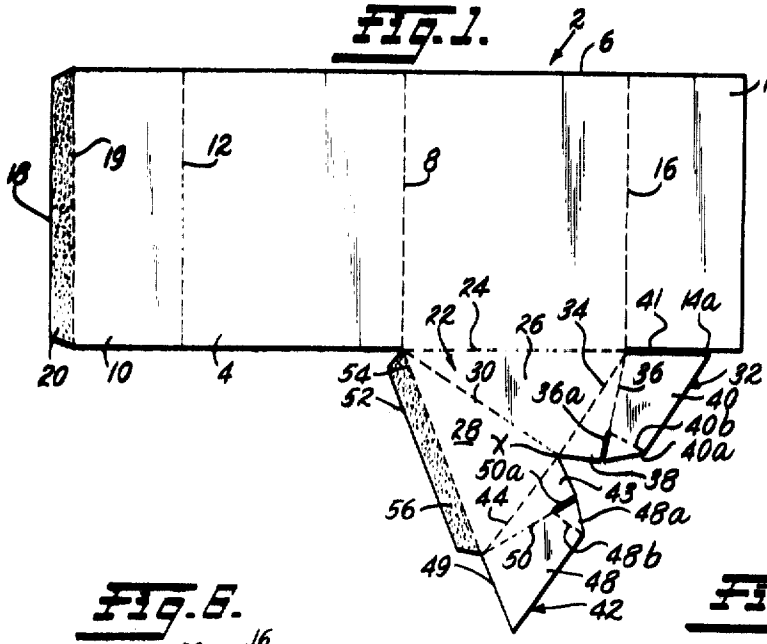


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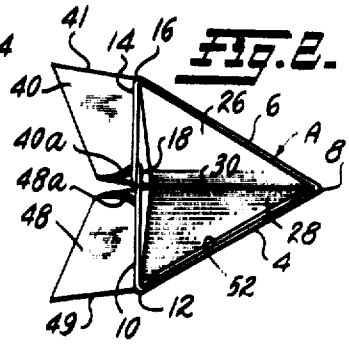


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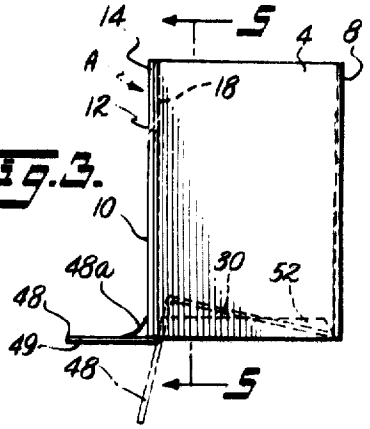


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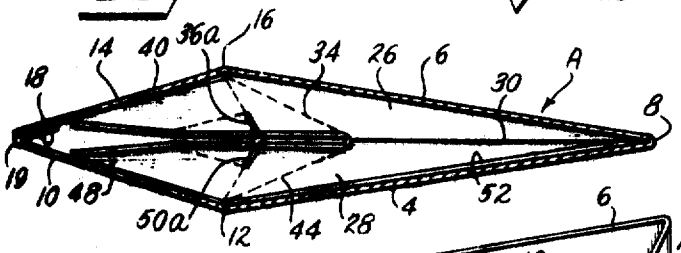


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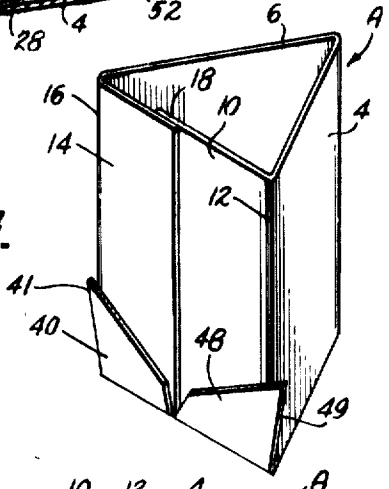


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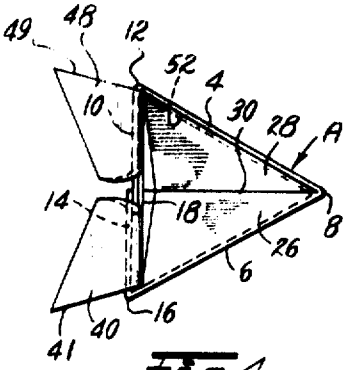
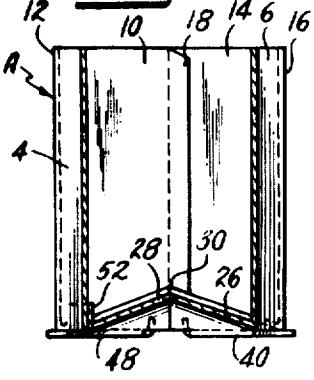


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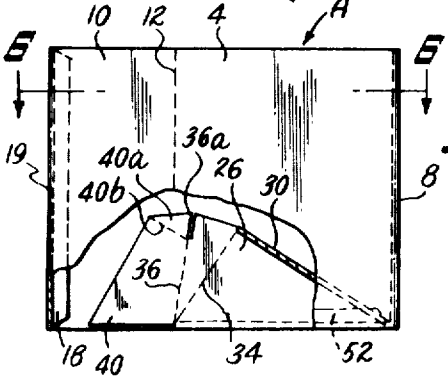


Fig. 7.

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ATTORNEYS

Fig. 9.

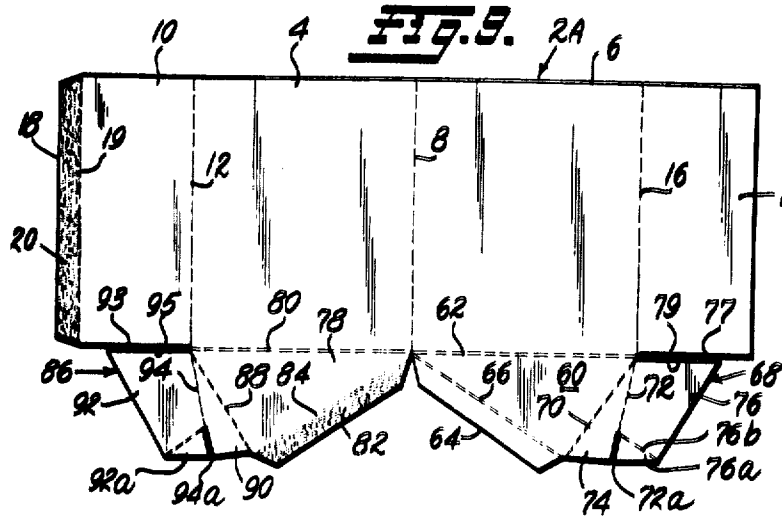


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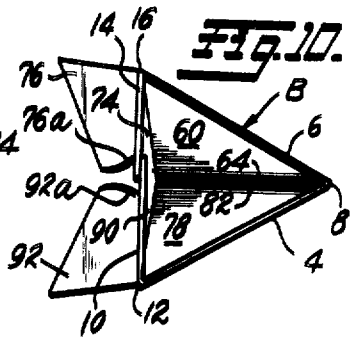


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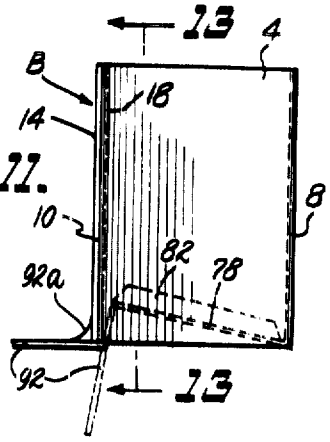


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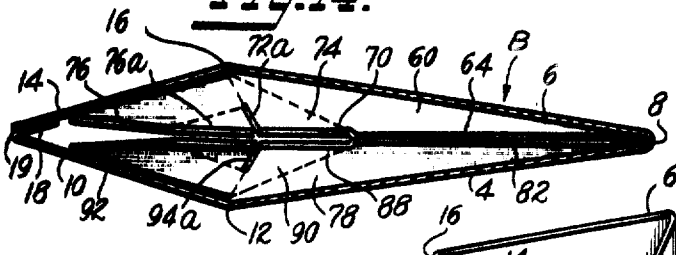


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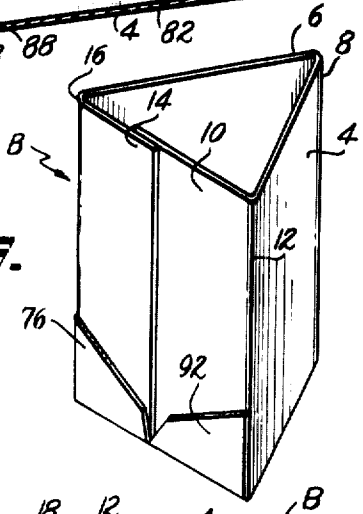


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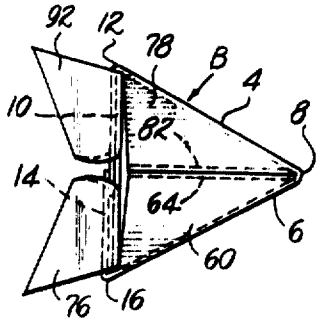


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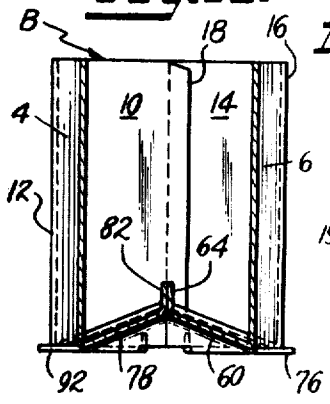
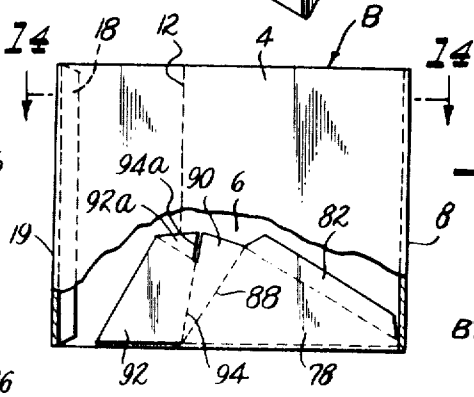


Fig. 15.



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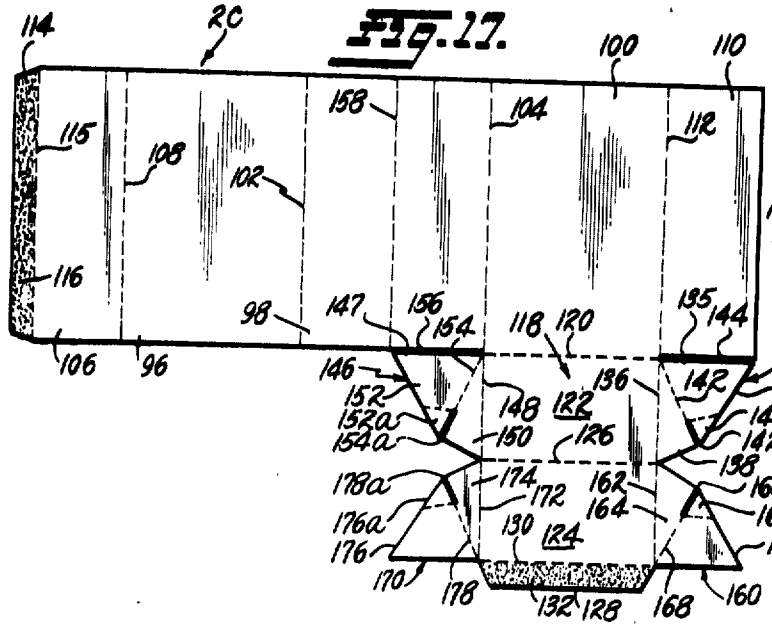


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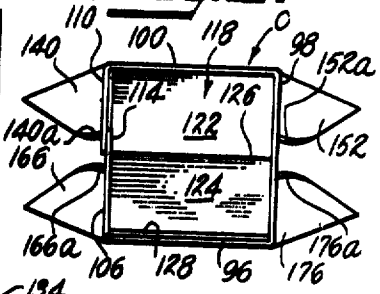


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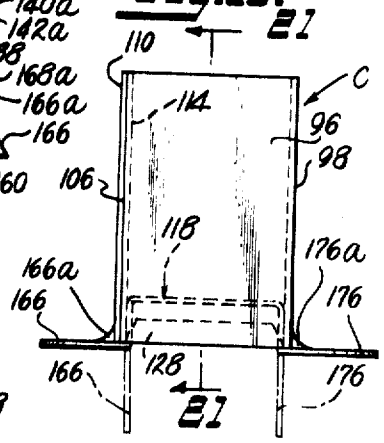


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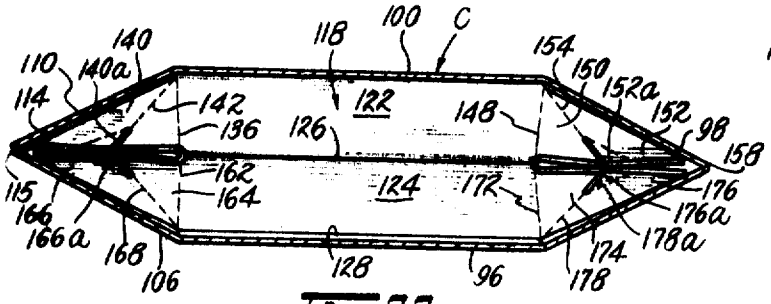


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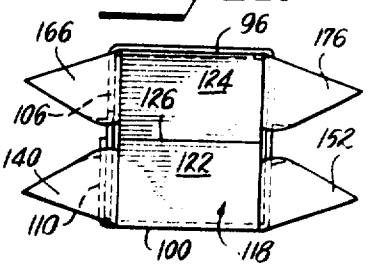


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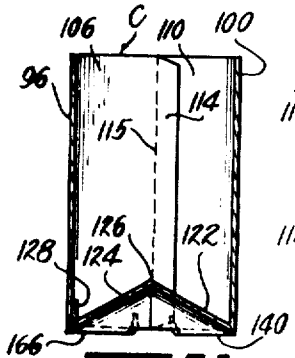


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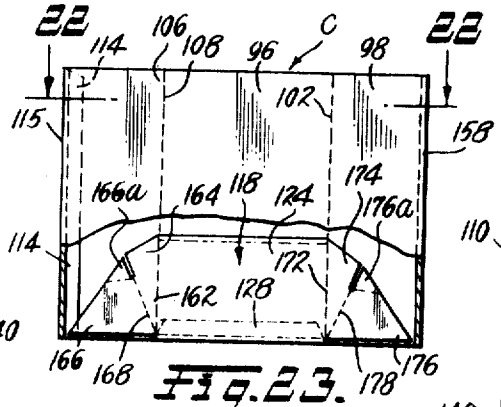


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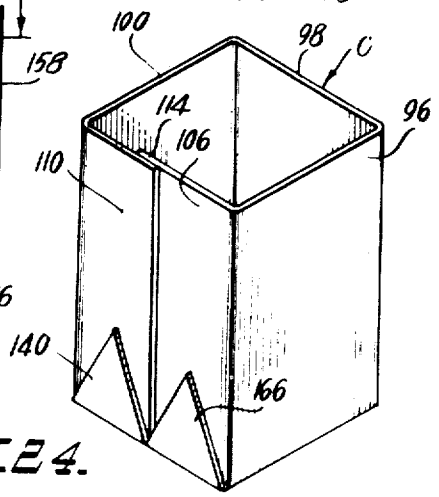


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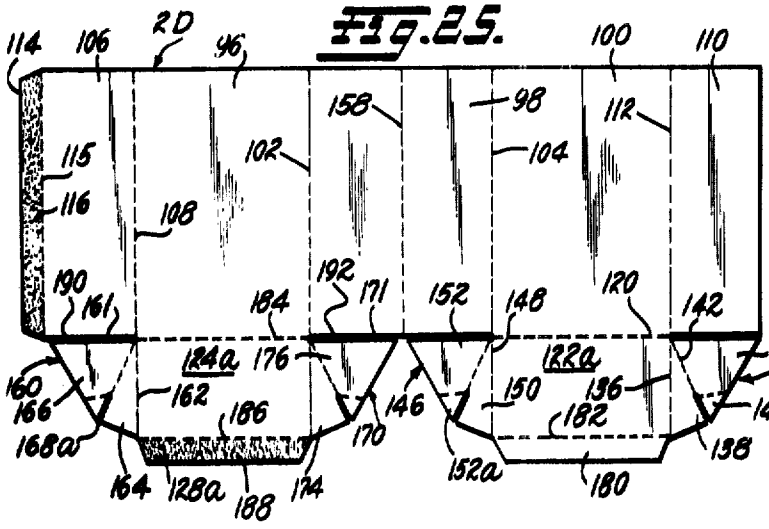


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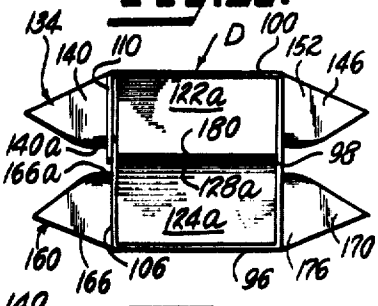
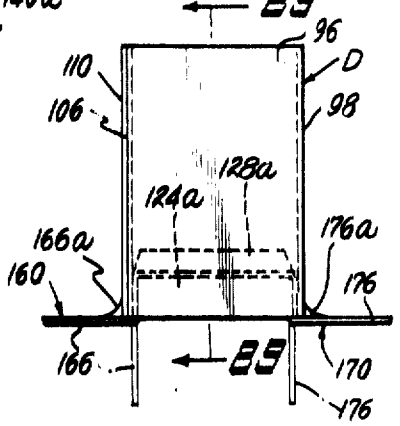


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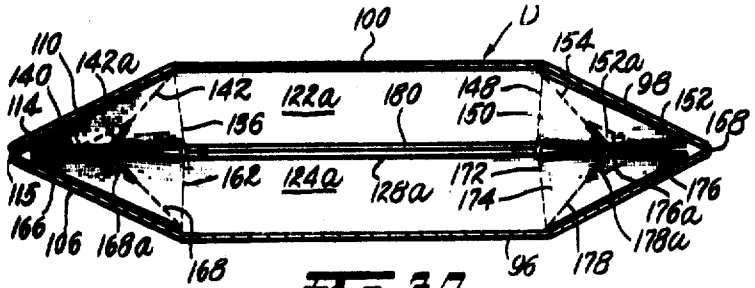
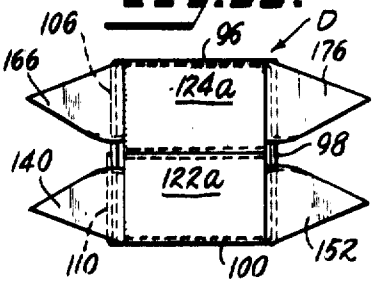
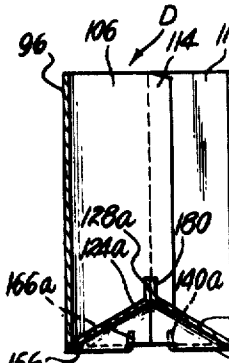


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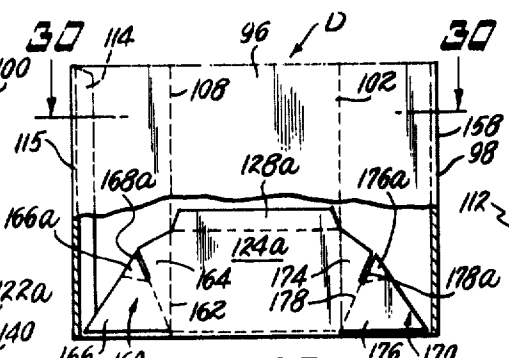


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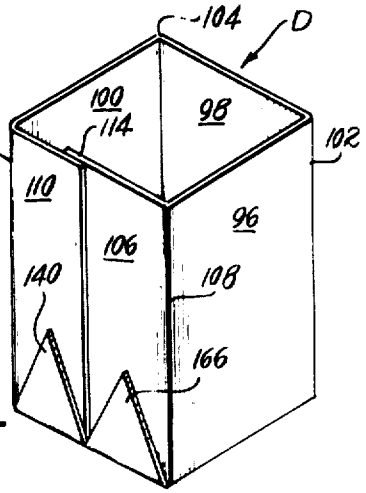


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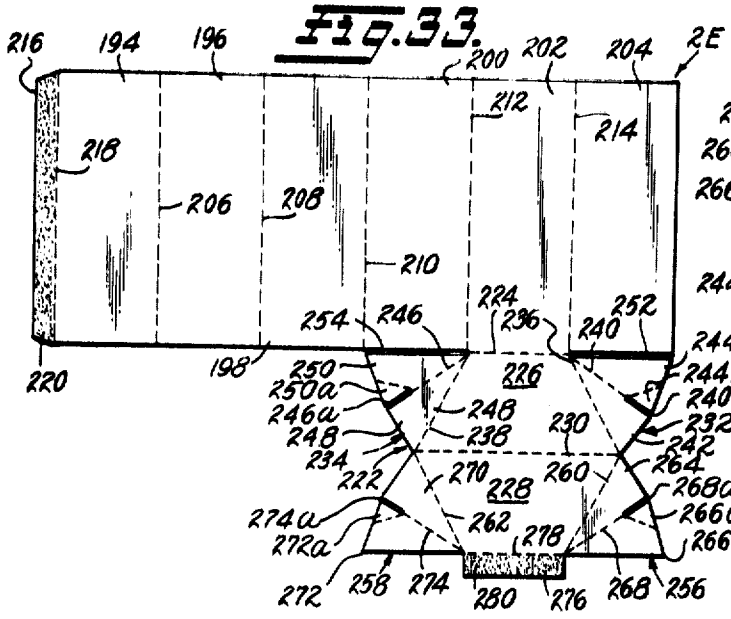


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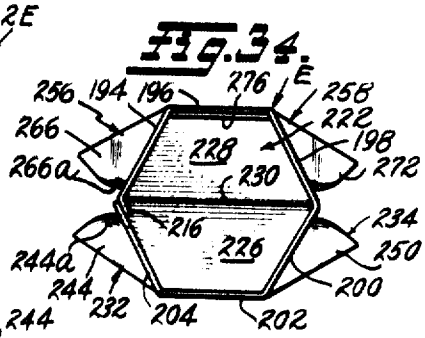


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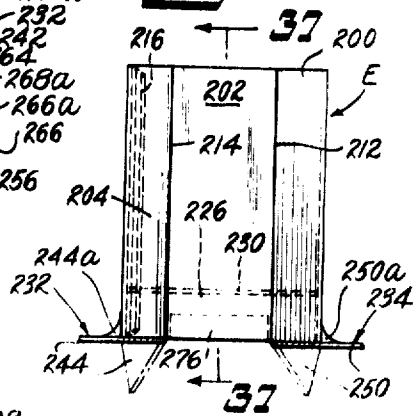
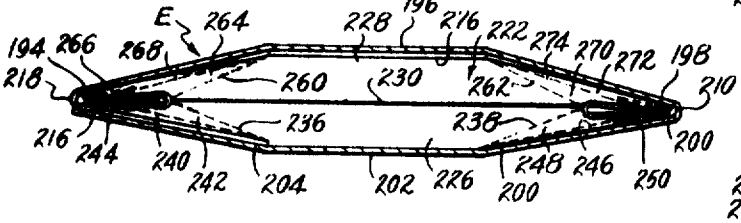


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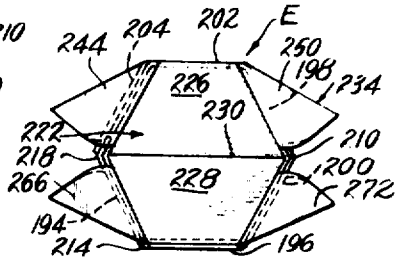
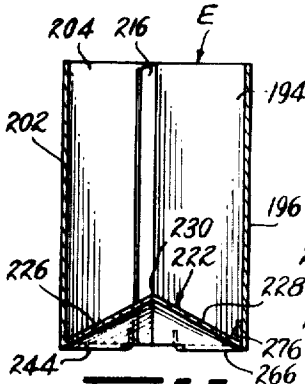


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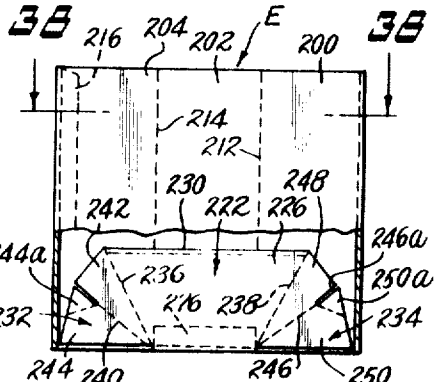


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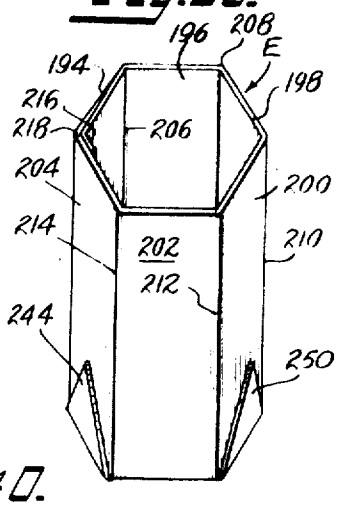


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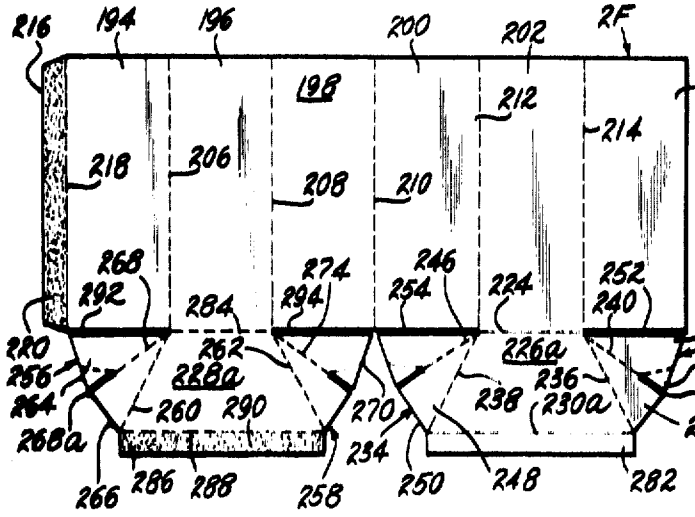


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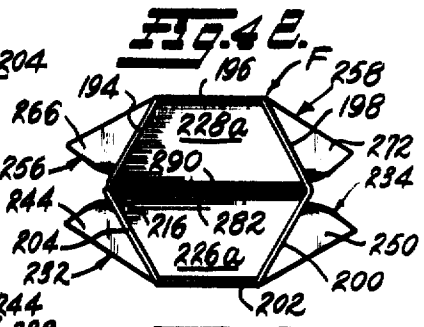


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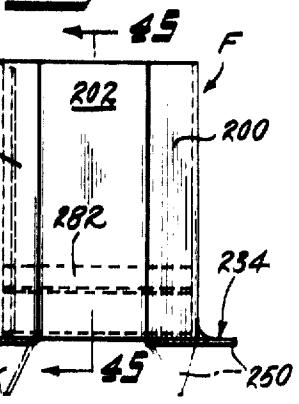


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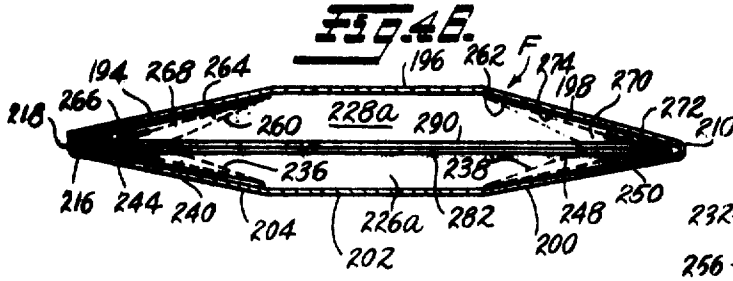


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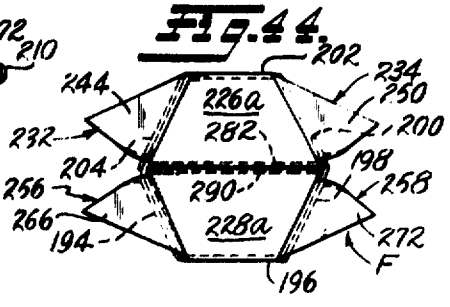


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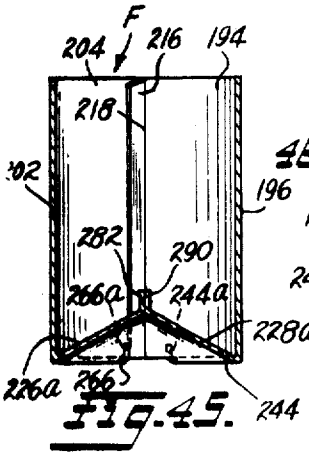


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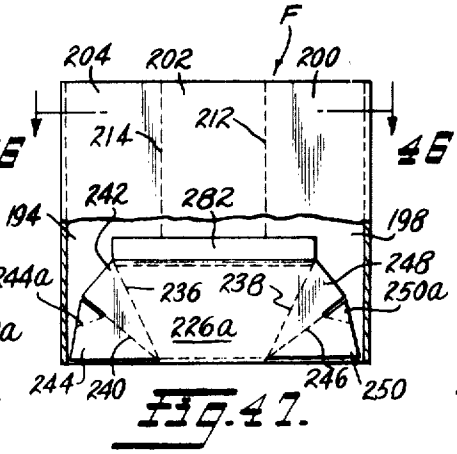


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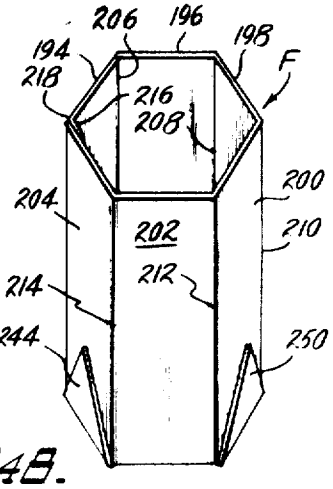


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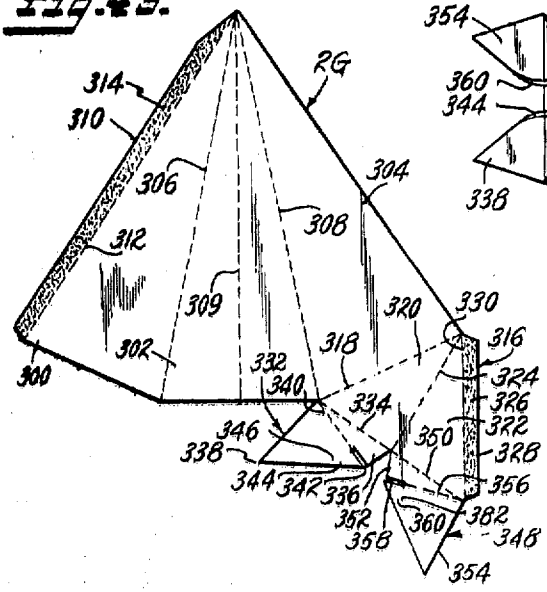


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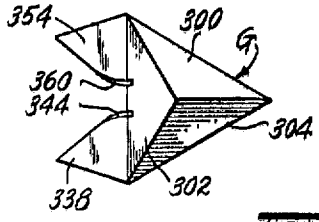


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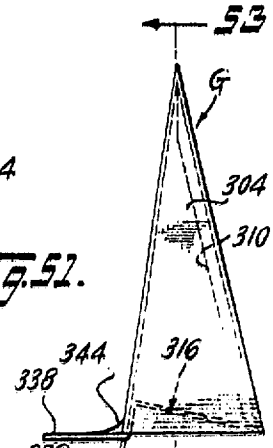


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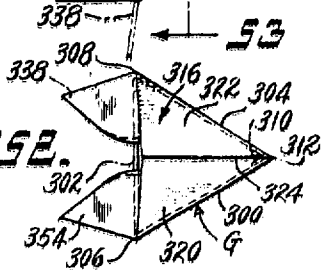
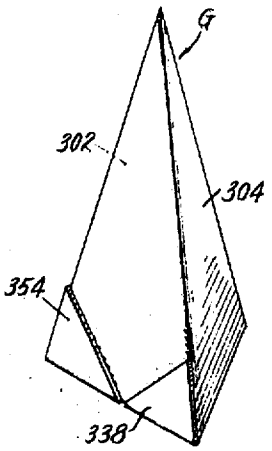


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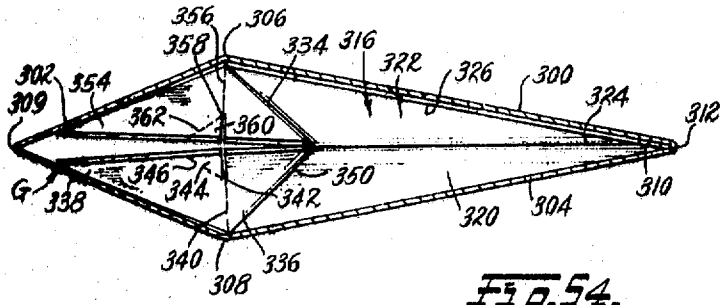


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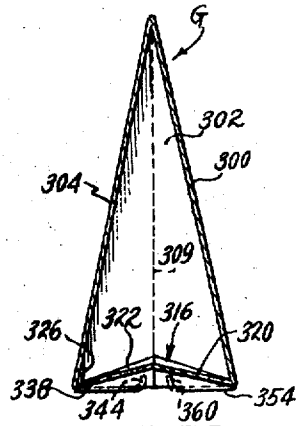


Fig. 53.

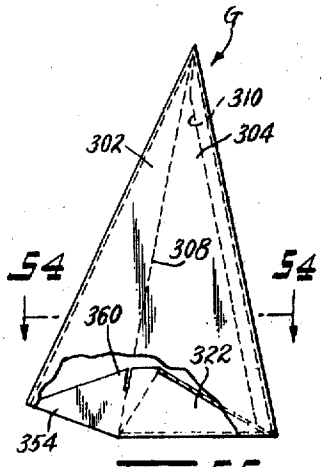


Fig. 55.

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Fig. 57.

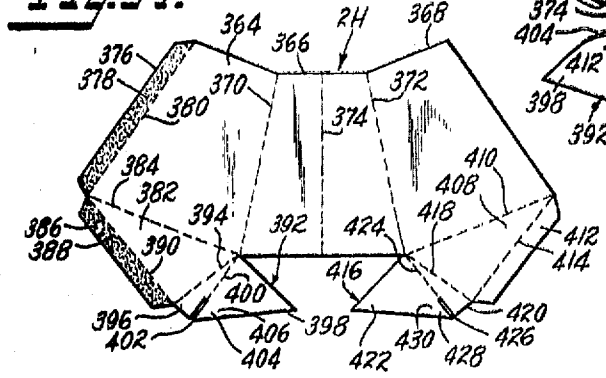


Fig. 58.

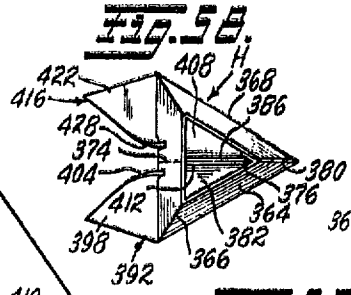


Fig. 59.

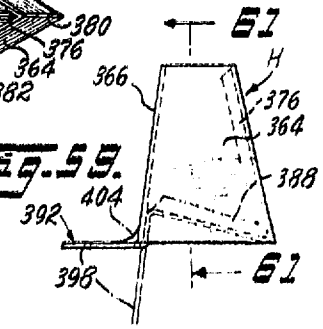


Fig. 60.

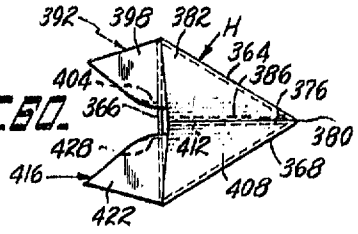


Fig. 62.

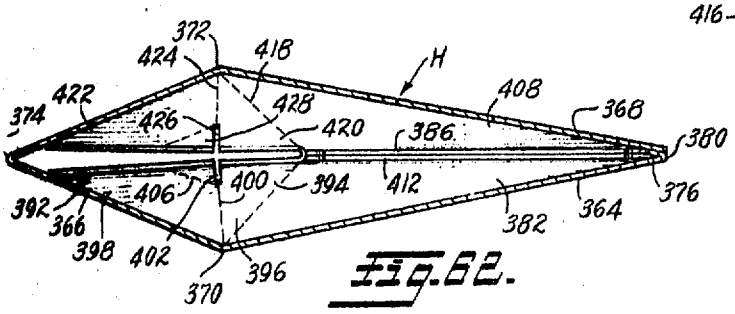


Fig. 64.

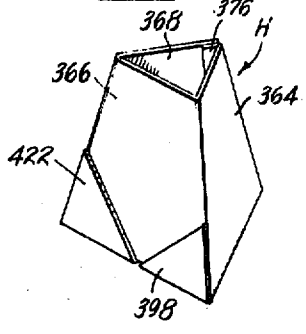


Fig. 61.

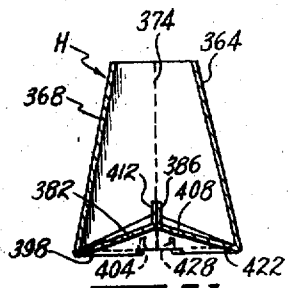
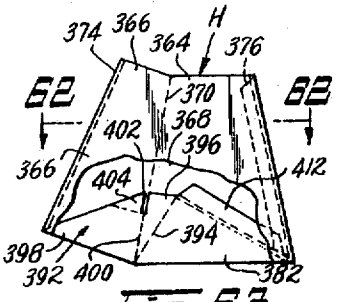


Fig. 63.



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EXPANSIBLE AND COLLAPSIBLE MULTI-SIDED STRUCTURES AND BLANKS THEREFOR

BACKGROUND OF THE INVENTION

This invention relates to multi-sided containers formed from one-piece blanks to provide expansible and collapsible containers, or permanently erected containers. These containers can be used as advertising pieces, as pencil caddies, as holders for other articles, as shipping containers, or as display units. Their size is limited only by type of structural strength material used, which may be paper, paperboard, corrugated board or any other suitable type of material lending itself to specific uses.

DESCRIPTION OF THE PRIOR ART

Various forms of multi-sided containers have been heretofore proposed, but many of these require the use of complicated blanks, are wasteful of material, and require considerable time and often present annoying difficulties in assembly and erection. Also, numerous prior expansible containers tend to be self-collapsing and, therefore, do not remain in properly erected condition, are unstable, and can be readily upset.

The foregoing objections are overcome by the present invention, which provides expansible and collapsible multi-sided containers that can be formed from a simple, one-piece blank, can be easily assembled, are readily expanded and collapsed, have good stability, and can be temporarily locked in erected condition or maintained in permanently erected condition.

SUMMARY OF THE INVENTION

The present invention relates to multi-sided containers made from pre-scored one-piece blanks of any suitable sheet material. The blanks can be readily folded and assembled, so that after their initial assembly they can be either collapsed, or expanded and temporarily locked in erected condition; or alternatively, the same blanks can be used to provide permanently erected containers.

The blanks are designed to provide a container of the desired of sides and are further designed so that the bottom of the container is formed by a single section, or two cooperating sections, each having one or more feet for imparting added stability to the container. The blanks can be folded and initially assembled by stapling or by the use of an adhesive preapplied to tabs on the blanks and moistened prior to securing the parts together. The initially assembled containers can be expanded and collapsed, at will; or by a further assembly operation, converted to a permanently erected or expanded condition.

The present multi-sided containers are ideally suited for use as advertising pieces and to additionally serve a utilitarian purpose, for example, as a pencil caddy or holder for various items. The containers can also be optionally permanently erected and used for shipping various articles, and upon arriving at destination be used as a display unit. In either case, they can be imprinted with decorative, pictorial, advertising, or other matter. The collapsible feature makes it possible to pack or store a great many of the initially assembled, but unexpanded containers, in a small space, and/or to distribute the containers in a collapsed condition through the mails.

The invention further relates to the scored or creased blanks for making the containers. The number of sides of the containers, obviously is predetermined by the particular design of the container blanks, and while containers of three, four and six-side configuration have been disclosed herein, it will be understood that the same principles of design are applicable to multi-sided containers of any desired number of sides. Here again, the sides may be rectangular in shape to form a polygonal structure or triangular to form a pyramidal structure of either full height, or less to form a truncated structure as well as other geometric variations and configurations.

The bottom wall of the containers, whether made of one or more sections, generally conforms to the polygonal shape of the container. In each instance the bottom wall is formed by one or more extensions of the side walls. If the container is three-sided, the bottom wall is triangular with a vertical fold line passing through its apex, or is made of two triangular sections joined together and made foldable along their vertical sides. If the container is four-sided, the bottom wall is made of a single rectangular section with a medial fold line, or two smaller rectangular sections joined together and rendered foldable along one of their longitudinal edges. If the container is hexagonal, the bottom wall is made in the form of a hexagon with a medial fold line, or is formed by two trapezoidal sections joined together and rendered foldable along their base.

In all forms of the blanks disclosed herein, the bottom wall section or sections has one or more extensions including a triangular portion that serves as a part of the bottom wall, and a flap or foot portion. The flaps, when used as foot portions extend horizontally and serve as stabilizers. Alternatively, the flaps can be folded back against the exterior surface of the adjacent wall and permanently secured thereto to provide a permanently erected and expanded structure.

DESCRIPTION OF THE DRAWINGS

FIGS. 1 to 7, inclusive, illustrate one embodiment of the invention, wherein FIG. 1 is a view of an integral stamped blank, or cut out, that can be folded to form a three-sided collapsible and expandible structure, and wherein the bottom wall is formed by one section;

FIG. 2 is a plan view of an expanded, three-sided structure, with feet extended and locking tabs raised, formed from the blank shown in FIG. 1;

FIG. 3 is a front elevational view of the structure of FIG. 2 with the feet shown in dot-and-dash lines prior to being folded to their horizontal, extended position;

FIG. 4 is a bottom view of the structure shown in FIG. 2;

FIG. 5 is a vertical sectional view, taken on the line 5—5 of FIG. 3;

FIG. 6 is an enlarged sectional view of the three-sided structure of FIG. 1 shown in a partially collapsed condition, as viewed on the line 6—6 of FIG. 7;

FIG. 7 is a front elevational view of the partially collapsed structure shown in FIG. 6 with side wall portions broken away and other portions in cross section to show the position of the bottom wall before the structure is fully collapsed;

FIG. 8 is a perspective view of the aforedescribed structure, showing the feet folded upwardly and secured to the adjacent side wall to provide a non-collapsible structure:

FIGS. 9 to 15, inclusive, illustrate a second embodiment of the invention, wherein FIG. 9 is a view of an integral blank that can be folded to form a collapsible and expandible three-sided structure, and wherein the bottom wall is formed by two sections;

FIG. 10 is a plan view of an expanded structure, with feet extended and locking tabs raised, formed from the blank of FIG. 9;

FIG. 11 is a front elevational view of the structure of FIG. 10, with the feet shown in dot-and-dash lines prior to being folded to their horizontal, extended position;

FIG. 12 is a bottom view of the structure of FIG. 11;

FIG. 13 is a vertical sectional view, taken on the line 13—13 of FIG. 11;

FIG. 14 is an enlarged sectional view of the structure of FIG. 10 shown in a partially collapsed condition, as viewed on the line 14—14 of FIG. 15;

FIG. 15 is a view of the structure of FIG. 14 with side wall portions broken away and other portions in cross section to show the position of the bottom wall before the structure is fully collapsed;

FIG. 16 is a perspective view of the structure shown in FIG. 10 with the feet folded upwardly and secured to the adjacent side wall to provide a permanently erected structure;

FIGS. 17 to 23, inclusive, illustrate a third embodiment of the invention, wherein FIG. 17 is a view of an integral blank

that can be folded to form a collapsible and expansible four-sided structure, the bottom wall being formed by one section;

FIG. 18 is a plan view of a four-sided structure with feet extended and locking tabs raised, formed from the blank shown in FIG. 17;

FIG. 19 is a front elevational view of the structure of FIG. 18 with the feet shown in dot-and-dash lines prior to being folded to their horizontal, extended position;

FIG. 20 is a bottom view of the structure shown in FIG. 19;

FIG. 21 is a vertical sectional view, taken on the line 21—21 of FIG. 19;

FIG. 22 is an enlarged sectional view of the four-sided structure of FIG. 18 shown in a partially collapsed condition, as viewed on the line 22-22 of FIG. 23;

FIG. 23 is a front elevational view of the partially collapsed structure shown in FIG. 22 with wall portions broken away and other portions in cross section to show the position of the bottom wall before the structure is fully collapsed;

FIG. 24 is a perspective view of the structure shown in FIG. 19 with the feet folded upwardly and secured to the adjacent side wall to provide a permanently erected structure;

FIGS. 25 to 31, inclusive, illustrate a fourth embodiment of the invention, wherein FIG. 25 is a plan view of an integral blank that can be folded to form a collapsible and expansible four-sided structure, and wherein the bottom wall is formed by two sections;

FIG. 26 is a plan view of the expanded four-sided structure with feet extended and locking tabs raised, formed from the blank shown in FIG. 25;

FIG. 27 is a front elevational view of the four-sided structure shown in FIG. 26 with the feet shown in dot-and-dash lines prior to being folded to their horizontal, extended position;

FIG. 28 is a bottom view of the structure shown in FIG. 27;

FIG. 29 is a vertical sectional view, taken on the line 29—19 of FIG. 27;

FIG. 30 is an enlarged sectional view of the structure of FIG. 26 shown in a partially collapsed condition, as viewed on the line 30—30 of FIG. 31;

FIG. 31 is a front elevational view of the partially collapsed structure shown in FIG. 30 with side wall portions broken away and other portions in cross section to show the position of the bottom wall before the structure is fully collapsed;

FIG. 32 is a perspective view of the structure shown in FIG. 27 with the feet folded upwardly and secured to the adjacent side walls to provide a non-collapsible structure;

FIGS. 33 to 39, inclusive, illustrate a fifth embodiment of the invention, wherein FIG. 33 is a plan view of an integral blank that can be folded to form a collapsible and expandible six-sided structure, and wherein the bottom wall is formed by one section;

FIG. 34 is a plan view of an expanded six-sided structure formed from the blank shown in FIG. 33;

FIG. 35 is a front elevational view of the structure shown in FIG. 34, with the feet shown in dot-and-dash lines, prior to being folded to their horizontal, extended position;

FIG. 36 is a bottom view of the structure shown in FIG. 35;

FIG. 37 is a vertical sectional view, taken on the line 37—37 of FIG. 35;

FIG. 38 is an enlarged sectional view of the six-sided structure of FIG. 34 shown in a partially collapsed condition as viewed on the line 38—38 of FIG. 39;

FIG. 39 is a front elevational view of the structure shown in FIG. 38 with side wall portions broken away to reveal the partially collapsed bottom wall;

FIG. 40 is a perspective view of the structure shown in FIG. 35 with the feet folded upwardly and secured to the adjacent side walls to provide a permanently erected structure;

FIGS. 41 to 47, inclusive, illustrate a sixth embodiment of the invention, wherein FIG. 41 is a plan view of an integral blank that can be folded to form a collapsible and expansible six-sided structure, and wherein the bottom wall is formed by two sections;

FIG. 42 is a plan view of a six-sided structure formed from the blank of FIG. 41;

FIG. 43 is a front elevational view of the structure shown in FIG. 42, with the feet shown in dot-and-dash lines, prior to being folded to their horizontal, extended position;

FIG. 44 is a bottom view of the structure shown in FIG. 43;

FIG. 45 is a vertical sectional view, taken on the line 45—45 of FIG. 43;

FIG. 46 is an enlarged sectional view showing the structure in a partially collapsed condition, as viewed on the line 46—46 of FIG. 47;

FIG. 47 is a front elevational view of the structure of FIG. 46 with side wall portions broken away to reveal the partially collapsed bottom wall;

FIG. 48 is a perspective view of the structure shown in FIG. 42 with the feet folded upwardly and secured to the adjacent side walls to provide a non-collapsible structure;

FIGS. 49 to 55, inclusive, illustrate a seventh embodiment of the invention, wherein FIG. 49 is a plan view of an integral blank that can be folded to form a three-sided pyramidal structure and wherein the bottom wall is formed by one section;

FIG. 50 is a plan view of a three-sided pyramid formed from the blank shown in FIG. 49;

FIG. 51 is a front elevational view of the pyramid, with the feet shown in dot-and-dash lines, prior to being folded to their horizontal, extended position;

FIG. 52 is a bottom view of the structure shown in FIG. 51;

FIG. 53 is a vertical sectional view, taken on the line 53—53 of FIG. 51;

FIG. 54 is an enlarged cross-sectional view of the pyramid in a partially collapsed condition, as viewed on the line 54—54 of FIG. 55;

FIG. 55 is an elevational view of the partially collapsed structure of FIG. 54 with side wall portions broken away to reveal the bottom wall;

FIG. 56 is a perspective view of the pyramid showing the feet folded upwardly and secured to the adjacent side wall to provide a non-collapsible structure.

FIGS. 57 to 63, illustrate an eighth embodiment of the invention, wherein FIG. 57 is a plan view of an integral blank that can be folded to form a three-sided truncated pyramidal structure, wherein the bottom wall is formed by two sections;

FIG. 58 is a plan view; FIG. 59 is a front elevational view; and FIG. 60 is a bottom view of the truncated pyramid;

FIG. 61 is a vertical sectional view, taken on the line 61—61 of FIG. 59;

FIG. 62 is an enlarged sectional view showing the truncated pyramid in a partially collapsed condition, as viewed on the line 62—62 of FIG. 63;

FIG. 63 is a front elevational view of the structure shown in FIG. 62 with portions of two of the side walls and part of the bottom wall broken away to show the bottom wall in a partially collapsed condition; and

FIG. 64 is a perspective view of the structure shown in FIG. 59 with the feet folded upwardly and secured to the adjacent side wall to provide a permanently erected structure.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1 to 8 of the drawings, FIG. 1 illustrates a blank 2 suitable for making a three-sided container A. The blank 2 provides two full side walls 4 and 6 joined together along a fold or score line 8. (For simplicity of illustration, all fold lines are shown in dotted lines.) The wall 4 has a half-wall section 10 joined thereto along a fold line 12, and wall 6 has a cooperating half-wall section 14 joined thereto along a fold line 16. Each of the side walls or sections 4, 6, 10 and 14 is generally rectangular, but may have any other desired shape. The wall section 10 has a projecting tab or flap 18 joined thereto along a fold line 19 and coated with adhesive 20 for securing the same to the wall section 14 to form a three-sided structure as illustrated in FIG. 2. The fold lines 8, 12, 16 and

19 permit collapsing of the side walls of the structure, as will be explained more fully later.

The side wall 6 has a one-piece, generally triangular bottom wall 22 joined thereto along a fold line 24. The bottom wall 22 comprises two similar triangular sections 26 and 28 joined together along a fold line 30 coinciding with a side of the triangles. The fold line 24 extends along the hypotenuse of the bottom section 26. A generally rhomboid-shaped extension 32 is joined to the base of the bottom section 26 along a fold line 34. The fold line 34 is slightly greater in length than the width of the half-wall 14. The extension 32 is divided by a fold line 36 into a scalene-shaped bottom wall portion 38 and an irregular quadrilateral-shaped flap or foot portion 40. The length of the fold line 36 is equal to the width of the half-wall 14. The length of the fold line 30 is such that the angle between the fold lines 30 and 34 is slightly less than 90°. As is best shown in FIG. 1, the extension 32 is severed from the half-wall 14 along a cut line 14*a*.

The bottom section 28 has a similar extension 42 joined thereto along a fold line 44 and comprises a bottom wall portion 43 and a flap or foot portion 48 joined thereto along a fold line 50. As will be noted, the fold lines 30, 34 and 44, meet at a point marked X. A tab or flap 52 is joined to the hypotenuse of the bottom section 28 along a fold line 54. The fold line 54 is equal in length to the width of the side wall 4. A flap 52 is provided with adhesive 56 for joining the bottom wall 22 to the lower end of the side wall 4. The confronting edges of the two triangular bottom portions 38 and 43 diverge on an angle of about 60°; and the confronting edges of the foot portions 40 and 48 diverge on an angle of about 90°. The outer edge 41 of the foot portion 40 is aligned with the fold line 24, and the outer edge 49 of the foot portion 48 is aligned with the fold line 54.

In assembling the blank 2, the side walls 4, 6, 10, and 14 are folded along their fold lines 8, 12, and 16, so that the free edge of wall 14 overlaps the adhesive 20 on the flap 18. The walls 10 and 14 can be permanently joined by moistening the adhesive 20 and pressing the walls together in the zone of the adhesive. Alternatively, the walls 10 and 14 can be stapled together. The bottom wall 22 is formed by folding the triangular sections 26 and 28 along the fold line 30 so that their outer sides confront each other, and then folding the extensions 32 and 42 along the fold lines 34 and 36 to overlie the bottom portions 26 and 28, respectively, and then folding the foot portions 40 and 48 back along the fold lines 36 and 50. The folded portions are then tucked into the partially assembled structure with the base portions 38 and 43 engaging side wall portions 14 and 10, respectively. The flap 52 will have been folded back along the fold line 54 so that it extends upwardly and is received within the structure in confronting relation to the lower portion of the side wall 4. The adhesive 52 is moistened to permanently attach the free side of the bottom wall 22 to the side wall 4. Here again, staples can be used instead of the adhesive 20.

The bottom portions 26 and 28, and 38 and 42 will assume a slightly angular position as shown in FIGS. 3 and 5, with the fold line 30 sloping downwardly from point X toward the fold line 8 and the fold lines 34 and 44 sloping downwardly toward the fold lines 16 and 12, respectively. The fold lines 36 and 50 coincide with the lower edge of the side wall sections 14 and 12, respectively. The foot portions 40 and 48 will project downwardly as shown in dot-and-dash lines in FIG. 3 and are folded along said fold line to extend horizontally beyond the side wall sections 10 and 14, as illustrated in full lines.

It will be noted from FIG. 5 that the bottom portions 26 and 28 form an arch, which supports the side walls 4 and 6 against collapse and inherently tends to urge these side walls apart. The extended foot portions 40 and 48 add stability to the structure to retain it in an upright position.

In order to avoid any tendency of the structure A to collapse, and in order to positively lock the bottom wall 22 within the structure, a lock-slot 36*a* is cut along the fold line 36 for about one-fourth of its length, and a similar lock-slot 50*a* is formed along the fold line 50. The lock-slot 36*a* may be of any desired length and provides a tab 40*a* that can be folded to a vertical position along a fold line 40*b*; and the lock-slot 50a likewise may be of any length and forms a tab 48*a* that can be folded to a vertical position along a fold line 48*b*. In this manner, the tab 40a locks the lower edge of the side wall section 14 against the bottom portion 38 and the tab 48*a* locks the side wall section 10 against the bottom wall portion 43, and prevents the structure from tending to collapse.

FIG. 6 shows the three-sided container structure A in a partially collapsed condition. In order to collapse the structure A, it is merely necessary to flatten the tabs 40*a* and 48*a* and to push the bottom wall 22 upwardly into the container along the fold line 30. This will cause the wall portions 10 and 14 to be collapsed outwardly along the fold line 19 and will result in the feet 40 and 48 automatically being drawn into the container, as the side walls 4 and 6, and 10 – 14 are pressed toward each other. In order to fully collapse the structure the opposing side wall portions 10 – 14 and 4 and 6 are brought into contact with each other in the region above the bottom wall 22. FIG. 7 shows the bottom wall collapsed and received within the container A.

When it is desired to expand the container A, it is only necessary to press the edges of the container at the fold lines 8 and 19 toward each other and such action will automatically push the bottom wall 22 downwardly along the fold line 30 until the fold lines 36 and 44 coincide with the lower edge of the side wall 10 – 14. The bottom portions 26 and 28 will then spread the side walls 4 and 6 apart and draw the side wall 10 – 14 inwardly. The foot portions 40 and 48 will have assumed the dot-and-dash position shown in FIG. 3, whereupon they are manually folded to a horizontal position and will add stability, when the container A is placed upon a flat surface. The locking tabs 40*a* and 48*a* can be turned upwardly to positively lock the side wall 10 – 14 in position, as previously described, to maintain the container in fully expanded condition.

The foot portions 40 and 48 can be folded to a vertical position, as shown in FIG. 8, and secured by adhesive or staples to their associated side wall portions 14 and 10, respectively. The projecting edges 41 and 49 of the foot portions can then be cut back flush with the corner edges defined by the fold lines 16 and 12, respectively. Alternatively, the blank 2 can be initially cut to modify the foot portions 41 and 49 to the necessary shape to provide flush edges. Also, when the ultimate structure is to be of the permanently erected form, the lock-cuts 36*a* and 50*a* are omitted.

FIGS. 9 to 16 illustrate a modified form of blank 2A and a three-sided container structure B formed therefrom. The blank 2A is similar to the blank 2, except that the bottom wall is formed by two sections instead of one. In the interest of brevity, the parts shown in FIG. 9 corresponding to those shown in FIG. 1, have been identified by the same reference numerals.

With specific reference to FIG. 9, the side wall 6 has a triangular bottom wall section 60, similar to bottom section 26, joined along its hypotenuse to the lower edge thereof along a fold line 62. The bottom wall 60 has a tab 64 connected to its side along a fold line 66. An extension 68 is connected to its base along a fold line 70, and is divided along a fold line 72 into a base portion 74 and a foot portion 76. A lock-cut 72*a* extends along the fold line 72 for about one-fourth of its length and a locking tab 76*a* is formed when the foot 76 is folded along the line 76*b*. The foot 76 has one edge 77 formed by severing the same from the wall portion 14 along a cut-line 79.

The side wall 4 has a similar bottom section 78 joined thereto along a fold line 80 with an adhesive tab 82 connected to its side along a fold line 84, and an extension 86 connected to its base along a fold line 88 and divided into a bottom portion 90 and a foot portion 92 connected together along a fold line 94. A lock-cut 94*a* and fold line 92*b* provide a locking tab 92*a* similar to the tab 76*a*. The foot portion 92 has an edge 93 that is formed by severing the same from the wall portion 10 along a cut-line 95.

In assembling the blank 2A to form a three-sided container B, the adhesive tab 18 is connected to the free edge of the side wall 14, as previously described. The bottom wall portions 60 and 78 are then interconnected by securing the tabs 64 and 82 together by adhesive or otherwise. The bottom portions 74 and 90 are folded on their fold lines 72 and 94, respectively, and extend downwardly and outwardly, as illustrated in dot-and-dash lines in FIG. 11, and the feet 76 and 92 are folded from their dot-and-dash line position to their full line horizontal position and serve to stabilize the container B in the same manner as feet 40 and 48. The locking tab 76*a* and 92*a* can be bent upwardly to lock the side wall 10 – 14 in place and maintain the container B in erected condition. The container B can be collapsed by pushing the bottom wall portions 60 and 78 upwardly, and can be expanded by applying pressure to squeeze the side edges at the fold lines 8 and 19 toward each other, thereby pushing these bottom wall portions downwardly, in the same manner described in connection with FIGS. 2 to 7. The feet 76 and 92 can be permanently secured to their associated side wall portions 14, 10, respectively, to provide a permanently erected container as illustrated in FIG. 16, and as previously described with respect to FIG. 8. The projecting edges 77 and 93 on the feet 76 and 92 are shown in FIG. 16 as cut back, or preformed, in the blank 2B, so that they are flush with the corner edges defined by the fold lines 16 and 12, respectively. Here again, the lock-cuts 72*a* and 94*a* can be omitted when the blank is to be used to make a permanently erected container.

FIGS. 17 to 24 illustrate a blank 2C and a four-sided container structure C formed from the blank, and having a one-piece bottom wall. The blank 2C comprises three full side walls 96, 98, and 100, joined along fold lines 102 and 104. The wall 96 has a half-wall section 106 joined thereto along a fold line 108, and wall 100 has a half-wall section 110 joined thereto along a fold line 112. The wall 106 has a projecting tab 114 joined thereto along a fold line 115 and coated with adhesive 116 for securing the same to the wall 110 to form a four-sided container, as illustrated in FIGS. 18 to 20. The side wall 96 has a one piece bottom wall 118 joined thereto at its lower edge along a fold line 120. The bottom wall 118 comprises two similar rectangular sections 122 and 124 joined together along a fold line 126. A tab 128 is joined to the bottom section 124 along a fold line 130, and has adhesive 132 applied thereto. The bottom wall section 122 has an extension 134 joined thereto along a fold line 136, and which extension is divided into a right triangular bottom wall portion 138 and an isosoles triangular foot portion 140 joined together along a fold line 142. The extension 134 has an edge 135 severed from the side wall portion 110 along a cutting line 144 and has a lock-cut 142*a* aligned with the fold line 142 to provide a locking tab 140*a*. The bottom wall section 122 has a similar extension 146 joined to its opposite edge along a fold line 148 and divided into a bottom wall portion 150 and a foot portion 152 joined along a fold line 154. The extension 146 has an edge 147 severed from the side wall 98 along a cutting line 156 and has a lock-cut 154*a* aligned with the fold line 154 to provide a locking tab 152*a*. It will be noted that the maximum horizontal length of the extensions 134 and 146 equals about half the width of the side walls 98 and 106 – 110 of the container C. The side wall 98 has a fold line 158 midway of the width thereof to permit collapsing of the container C, as will appear later.

The other bottom wall section 124 has an extension 160 joined thereto along a fold line 162 and divided into a bottom wall portion 164 and a foot portion 166 along a fold line 168. A similar extension 170 extends from the opposite edge of the bottom wall portion 124 from a fold line 172. The extension 170 is divided into a bottom wall portion 174 and a foot portion 176 connected along a fold line 178. A lock-cut 168*a* is aligned with the fold line 168 to form a locking tab 166*a*, and a lock-cut 178*a* is aligned with the fold line 178 to form a locking tab 176*a*. The angle between the confronting edges of the bottom portions 138 – 165 and 150 – 174 in FIG. 17 is about 60°, and the edges of the foot portions 140 – 166 and 152 – 176 diverge on an angle of about 120°.

In assembling the four-sided structure C, the tab 114 is fastened to the side wall portion 110 in overlaping relation by the adhesive 116, as shown in FIG. 18, and the bottom tab 128 is secured to the side wall 96, by the adhesive 132. In both instances staples can be used instead of the adhesive. The bottom wall sections 122 and 124 have a vertical dimension, as viewed in FIG. 17, which is slightly greater than one half of the width of the side wall portions; wherefore, when the tab 128 is secured in place, as illustrated in FIG. 21, the bottom wall portions will extend inwardly and upwardly with the fold line 126 uppermost and form an arch resisting inward movement of walls 96 and 100. The extensions 134, 146, 160 and 170 will be folded downwardly along their respective fold lines 136, 148, 162 and 172, so that the bottom wall portions 138, 150, 164 and 174 contact the adjacent inner surface of the side walls. Specifically, the portion 138 will contact the side wall portion 110, the portions 150 and 174 will contact the side wall 98, and the portion 164 will contact the side wall portion 106. The feet 140, 152, 166, and 176 will initially extend vertically as shown in dot-and-dash lines in FIG. 19. They are then folded to extend horizontally and provide stabilizers for the container C. The side wall 98 can be locked in place by turning up the locking tabs 152*a* and 176*a*, and the side wall 106 – 110 can be locked in place by turning up the locking tabs 166*a* and 142*a*, as shown in FIGS. 18 to 22.

FIG. 22 shows the container in a partially collapsed condition, wherefrom it will be noted that the side wall 98 is folded along the fold line 158 and the side wall 106 – 110 along the fold line 115. Also, that the bottom wall portions 122 and 124 and the extensions 140, 146, 160, and 170 are disposed in confronting relation. FIG. 23 illustrates the lower end of the container with the lower portion of the side walls 98, 100, and 110 broken away so that the bottom wall 118 appears in full view, within the container.

The container shown in FIGS. 18 to 24 can be expanded from a flat condition by pressing the sides at the fold lines 115 and 158 toward each other or by pushing downwardly on the bottom wall 118 until the fold lines 142, 154, 168 and 178 are in the same plane as the lower edges of the side walls. The foot portions 140, 152, 166 and 176 extend vertically downwardly as illustrated by the dot-and-dash lines in FIG. 19. These foot portions are folded outwardly along their fold lines to the horizontal position indicated in solid lines, whereby to serve as stabilizing feet for the container. The locking tabs 140*a*, 152*a*, 166*a* and 176*a* can then be folded upwardly to lock the walls 98 and 106 – 110 in place. The container can be readily collapsed by folding down the locking tabs and pushing the bottom wall 118 inwardly and upwardly, whereupon the foot portions are automatically retracted into the container.

FIGS. 25 to 32 illustrate a blank 2D that is similar to the blank 2C, except that the bottom wall of the container D resulting therefrom is formed by two separate sections 122*a* and 124a. The parts of the blank 2D of FIG. 25 corresponding to those of the blank 2C of FIG. 17 have been identified by the same reference numerals. The bottom wall section 122a is identical to the bottom wall section 122, except for the addition of a tab 180 joined thereto along a fold line 182. The extensions from the bottom wall section 122*a* are the same as in FIG. 17 and have been identified by the same reference numerals. The bottom wall section 124*a* is joined to the side wall 96 along a fold line 184 and carries a tab 128*a* joined thereto along a fold line 186. Tab 128*a* is coated with adhesive 188. The bottom wall section 124*a* carries extensions provided with fold lines corresponding to those in FIG. 17, and these have been identified by the same reference numerals. It is to be noted, however, that the extension 160 has an edge 161 severed from the side wall 106 by a cutting line 190, and that the extension 170 has an edge 171 severed from the side wall 98 by a cutting line 192.

The blank 2D is assembled by attaching the tab 114 to the side wall portion 110, in the same manner previously described. In assemblying the bottom wall, the bottom wall section 122*a* is folded inwardly along a fold line 120, and bottom section 124a is folded inwardly along its fold line 184.

The tabs **180** and **128***a* are then secured together by the adhesive **188**, or otherwise, as shown in FIG. **29**. The extensions **134**, **146**, **160**, and **170**, are folded in the same manner as in the container C shown in FIGS. **18** to **23** to stiffen the bottom wall and to support the side walls. The foot portions **140**, **152**, **166** and **176**, are folded along their respective fold lines to assume a horizontal position, as shown in FIG. **27**. The container D may be expanded and collapsed in the same manner described in connection with the container C of FIGS. **17** to **23**, or permanently erected as shown in FIG. **32**.

FIGS. **33** to **40** illustrate a blank **2E**, and a six-sided or hexagonal container structure E with a one-piece bottom wall, that can be formed therefrom.

Referring to FIG. **33**, the blank **2E** comprises side walls **194**, **196**, **198**, **200**, **202**, and **204** joined together along fold lines **206**, **208**, **210**, **212**, and **214**, as shown. The side wall **194** has a tab **216** connected thereto along a fold line **218**. Adhesive **220** is applied to the tab **216** for securing the same to the side wall **204**, as illustrated in FIG. **34**.

The bottom wall **222** is hexagonal and is connected to the lower end of the side wall **202** along a fold line **224**. The bottom wall **222** comprises trapezoidal sections **226** and **228** asymmetrically disposed on opposite sides of a horizontal fold line **230**. The bottom wall section **226** has extensions **232**, **234**, connected thereto along fold lines **236** and **238**, respectively, which are disposed at an angle of about 60° to the fold line **230**. Extension **232** is divided by a fold line **240** into a triangular bottom wall portion **242** and s similar foot portion **244**. The extension **234** is similarly divided by a fold line **246** into a bottom wall portion **248** and a foot portion **250**. The fold lines **240** and **246** extend on an angle of about 30° to the fold line **230**. The foot portion **244** is severed from the side wall **204** along a cutting line **252**, and the foot portion **250** is severed from the side wall **200** along a cutting line **254**. The extension **232** has a lock-cut **240***a* to provide a locking tab **244***a*, and the extension **234** has a lock-cut **246***a* to provide a locking tab **250***a*.

The bottom wall section **228** has extensions **256** and **258** connected thereto along fold lines **260** and **262**, respectively, which extend at an angle of about 60° to the fold line **230**. The extension **256** is divided into a triangular bottom wall portion **264** and a triangular foot portion **266** by a fold line **268** disposed on an angle of about 30° to the fold line **230**. The extension **258** is similarly divided into a bottom wall portion **270** and a foot portion **272**, by a fold line **274**. A tab **276** is joined to the bottom wall portion **228** along a fold line **278** and has adhesive **280** applied thereto. The extension **256** has a lock-cut **256***a* to provide a locking tab **266***a*, and the extension **258** has a lock-cut **274***a* to provide a locking tab **272***a*.

The vertical dimension of the bottom wall portions **226** and **228** as viewed in FIG. **33**, is about equal to the width of one of the side wall panels **194** to **204**, and the fold line **230** is about twice as long as the fold line **224**. Consequently, when the tab **216** is attached to the side wall **204** and the bottom tab **276** is attached to the wall **196**, the bottom wall sections **226** and **228** extend upwardly, arch-like into the container E, as shown in FIG. **37**. The fold lines **236**, **238**, **260**, and **262** are of necessity slightly longer than the width of the side wall panels **194** to **204** since they must assume an inclined position relative to the lower edge of the container E. On the other hand, the fold lines **240**, **246**, **268**, and **274** are equal in length to the width of side walls, so that in assembling the container E the bottom wall portions **242**, **248**, **264**, and **270** are received within the container and extend vertically in contact with the side walls **204**, **200**, **208** and **194**, respectively. The foot portions **244**, **250**, **266** and **272** initially extend vertically as indicated in the dot-and-dash lines in FIG. **35**, and are later folded outwardly to a horizontal position, as shown in full lines. The locking tabs **244***a*, **250***a*, **266***a* and **274***a* can then be folded upwardly to lock the side walls **204**, **200**, **194** and **198**, respectively, in place.

The hexagonal container E can be readily collapsed by pressing upwardly on the bottom wall **222** in the region of the fold line **230**. The bottom wall portion **242**, **248**, **264** and **270** and their associated feet will then be automatically retracted to a position within the container, as illustrated in FIGS. **38** and **39**. FIG. **38** illustrates the container in a partially collapsed condition and it will be understood that when fully collapsed, the opposed side walls **196** and **202** will contact each other, except for the areas thereof confronting the bottom wall **222**. The container E can be expanded by reversing the operation, that is, partially opening the container and pressing the bottom wall **222** downwardly along the fold line **230**, or more simply by pressing the side edges of the container at the fold lines **210** and **218** toward each other, until the feet **244**, **250**, **266** and **272** extend beyond the lower edge of their associated side walls, whereupon they can be folded outwardly to a horizontal position to form four stabilizer feet for the container, as best shown in FIGS. **34** and **35**.

The container E can be permanently erected by adhesively bounding or stapling the feet **244**, **250**, **266** and **272** to the outer side of their associated side walls **204**, **200**, **194**, and **198**, respectively, as exemplified in FIG. **40**.

FIGS. **41** to **48** illustrate a blank **2F**, and a six-sided container F that can be formed therefrom, wherein the bottom wall consists of two similar sections. The blank **2F** is similar in many respects to the blank **2E** and accordingly, corresponding parts have been identified by the same reference numerals. A bottom wall section **226***a* is identical to the bottom wall section **226**, except that it has a tab **282** joined thereto along a fold line **230***a*. A bottom wall section **228***a* is similar to the bottom wall section **228**, except that it is joined to the side wall **196** along a fold line **284**, and has a tab **286** connected thereto along fold line **288**, adhesive **290** being applied to the tab. It will also be noted that the extensions **256**, and **258** are severed from the side walls **194** and **198** along cutting lines **292**, and **294**, respectively.

In assembling the container, the tab **216** is connected to the side wall **204** in the same manner described in connection with the blank **2E**, and as shown in FIG. **42**. The bottom wall sections **226***a* and **228***a* are folded inwardly along the fold lines **224**, and **284**, respectively, and the tabs **282**, and **286** are connected together as best shown in FIG. **46**.

The container F can be collapsed by pulling upwardly on the tabs **282** and **286**, or by pushing the bottom wall sections **226***a* and **228***a* upwardly. The container F can be readily expanded by pushing downwardly on the tabs **282** and **286** until the foot portions **224**, **250**, **266**, and **272** project beyond the lower edges of their associated side walls, as shown in dot-and-dash lines in FIG. **43**, whereupon the foot portions are folded to a horizontal position to form supporting feet for the container, as illustrated in full lines, and the locking tabs **244***a*, **250***a*, **266***a*, and **272***a* folded upwardly.

If desired, the container F can be permanently erected by fastening the feet **244**, **250**, **266** and **272** to their associated side walls in the same manner as in the container E, previously described, and as shown in FIG. **48**.

FIGS. **49** to **56** illustrate a further embodiment of the invention in the form of a three-sided pyramid G. Referring to FIG. **49**, the pyramid G is formed from a blank **2G** comprising triangular side walls **300**, **302**, and **304**. The side walls **300** and **302** are joined along a fold line **306** and the side walls **302** and **304** are joined along a fold line **308**. The side wall **302** has a vertical fold line **308**, extending from the mid point of its base to its apex, that is utilized in collapsing the structure, as will be explained later. A tab **310** extends along a side edge of the wall **300** and is joined thereto along a fold line **312**. Adhesive **314** covers the outer face of the tab **310**. A generally triangular bottom wall **316**, somewhat similar to the bottom wall of the blank shown in FIG. **1**, is connected to the side wall **304** along a fold line **318**. The bottom wall **316** comprises triangular sections **320** and **322** joined together along a fold line **324**. A tab **326** coated with adhesive **328** is joined to the hypotenuse of the bottom wall section **322** along a fold line **330**. An extension **332** is connected to the base of the bottom section **320** along a fold line **334**. The extension **332** com-

prises a triangular bottom portion **336** and a triangular foot portion **338** joined together along a fold line **340**. A lock-cut **342** extends along the fold line **340** to provide a locking tab **344** foldable along a line **346**. An extension **348** is joined to the base of the bottom section **322** along a fold line **350** and comprises a triangular bottom portion **352** connected to a triangular foot portion **354** along a fold line **356**. A lock-cut **358** extends along the fold line **356** to form a locking tab **360** foldable along a line **362**.

The pyramid G is assembled by moistening the adhesive **314** on the flap **310** and fastening the same to the free edge of the side wall **304**, as is best shown in FIGS. **52** and **55**. The bottom section **322** is then folded over onto the outer side of bottom section **320** along the fold line **324** and the tab **326** is then folded back onto the outer side of section **322**. The extensions **332** and **348** are suitably folded along their fold lines **334** and **350**, respectively, so that the bottom wall **316** can be positioned within the partially erected pyramid G and the tab **326** secured to the lower edge of the side wall **300**. The foot portion **338** and **354** will extend below the lower edge of the side wall **300**, as shown in dot-and-dash lines in FIG. **51**, and are then folded to the horizontal full line position. The locking tabs **344** and **360** are then folded upwardly to a vertical position along their respective fold lines **346** and **362**, to lock the side wall **300** in position, as shown in FIGS. **50** and **51**.

The pyramid G can be readily collapsed by moving the foot portions **338** and **354** downwardly to a generally vertical position and pushing the bottom wall **316** upwardly into the pyramid G. This will result in a buckling or folding of the side wall **302** outwardly along the fold line **309**, as shown in FIG. **54**, which illustrates the pyramid G in a partially collapsed condition. As the pyramid G is collapsed, the extensions **332** and **348** are drawn into the pyramid, as illustrated in FIG. **55**. In order to erect the pyramid G, pressure is applied along the fold lines **309** and **312** to move them toward each other, thereby automatically spreading the walls **300** and **304** apart to expand the structure.

FIG. **56** shows the pyramid G with the feet **338** and **354** folded back against and secured to the wall **302** to provide a permanently erected structure, in such case the lock-cuts **342** and **358** can be omitted from the blank 2G.

FIGS. **57** to **64** illustrate a truncated pyramid H, which is formed from a blank **2H** somewhat similar to that shown in FIG. **9**, except that the side walls of the structure are trapezoidal instead of rectangular. Thus, the blank **2H** comprises three trapezoidal side walls **364**, **366**, and **368**. The side walls **364** and **366** are connected along a fold line **370** and the side walls **366** and **368** are connected along a fold line **372**. The side wall **366** has a medial fold line **374** that is utilized during collapsing of the structure, as will be pointed out later. The side wall **364** has a tab **376** coated with adhesive **378** and joined thereto along a fold line **380**.

The bottom wall of the truncated pyramid H comprises a generally triangular bottom wall section **382** connected to the side wall **364** along a fold line **384**. A tab **386** coated with adhesive **388** is connected to the side of the bottom wall section **382** along a fold line **390**. An extension **392** is connected to the base of the bottom wall section **382** along a fold line **394**, and comprises a triangular base portion **396** and a triangular foot portion **398** connected thereto along a fold line **400**. A lock-cut **402** is formed along a fold line **400** to provide a locking tab **404** connected thereto along a fold line **406**. A similar but reversly arranged triangular bottom section **408** is connected to the lower edge of the side wall **368** along a fold line **410**. A plain tab **412** is connected to the bottom section **408** along a fold line **414**. An extension **416** is connected to the base of the bottom section **408** along a fold line **418**. The extension **416** comprises a triangular bottom portion **420** and a triangular foot portion **422** joined thereto along a fold line **424**. A lock-cut **426** extends along the fold line **424** to provide a locking tab **428** foldable along a line **430**.

In assembling the truncated pyramid H, the side walls **364** and **368** are folded along their fold lines **370** and **372**, and the tab **376** is folded along its fold line **380** and secured to the free edge of the side wall **368** by the adhesive **378**, as shown in FIGS. **58** and **62**. The bottom sections **382** and **408** are folded inwardly along their respective fold lines **384** and **410** and the tabs **386** and **412** are folded so that they confront each other for securing the tabs together by the adhesive **388**. The extensions **392** and **416** are folded along their respective fold lines **394** and **418** so that the outer side of the base portions **396** and **420** confront the wall **366**. The foot portions **398** and **422** will extend beyond the lower edge of the side wall **366**, as indicated in dot-and-dash lines in FIG. **59**, and are then folded horizontally to the full line position to provide stabilizing supports for the assembled structure. The tabs **404** and **428** are then bent upwardly to lock the wall **366** between said tabs and the wall portions **396** and **420**. The bottom sections **382** and **408** form an arch, as shown in FIG. **61** to hold the side walls **364** and **368** in extended position and to brace the same against collapsing.

In order to collapse the truncated pyramid H, the bottom wall sections **382** and **408** are pushed upwardly into the structure along the fold lines **384** and **410**. Such action will cause the side walls **364** and **368** to move toward each other and the side wall **366** to be buckled and folded outwardly along the fold line **374** as illustrated in FIG. **62**. The bottom wall portions **382** and **408** and their associated extensions **392** and **416**, respectively, will then be drawn into the structure as illustrated in FIG. **63**. The side walls **364** and **368** can be brought into contact to fully collapse the structure to a flat condition.

The truncated pyramid H can be expanded by applying pressure along the fold lines **374** and **380** to spread the side walls **364** and **368** apart, or by pushing down on the tabs **386** and **412** through the open top of the structure to fully extend the side walls **364** and **368** and to draw and mid portion of the side wall **366** inwardly. The foot portions **398** and **422** may then be extended and locked in position, as previously described, should it be desired to permanently erect the structure H, the foot portions **398** and **422** can be folded back against the exterior of the side wall **366** and permanently secured thereto, as illustrated in FIG. **64**. In such case, the lock-slots **402** and **426** can be omitted from the blank **2H**.

While various blanks have been disclosed for making three, four, and six-sided structures, it will be understood that the same principles of design are applicable to other multi-sided structures, and further that the geometric configuration of the structures can be varied, without departing from the principles of the invention or the scope of the annexed claims.

I claim:

1. A blank for forming a multi-sided container structure, comprising: a sheet of material having a main body portion divided by transverse fold lines into at least three panels for forming the side walls of the structure, the panel at one end of said sheet having a tab associated therewith for securing the same to the panel at the opposite end of said sheet, at least one of said panels having a bottom wall portion connected thereto along a fold line at one of its longitudinal edges, said bottom wall portion being polygonal and having one of its sides defined by said longitudinal fold line and having a bottom tab connected thereto along a fold line, said bottom wall portion also having an extension projecting from at least one side thereof and joined thereto along a fold line, said extension including a triangular bottom wall portion and a flap portion connected to said triangular bottom wall portion along a fold line, said flap portion having an edge severed from an adjacent panel and adapted to serve as a stabilizing foot upon assembly of the structure.

2. A blank as defined in claim **1**, wherein a lock-cut is formed along the fold line between the triangular bottom portion and the flap to provide a locking tab.

3. A blank as defined in claim **1**, wherein the flap portion has an edge severed from an adjacent panel and is adapted to be folded into contact with and to be secured to one of said side wall panels, upon assembly of the structure, to maintain the structure in permanently erected condition.

4. A blank as defined in claim 1, wherein the polygonal bottom wall portion has a medial fold line with similar shaped sections on opposite sides of said medial fold line.

5. A blank as defined in claim 1, wherein the tab associated with the side wall panel is joined thereto along a fold line.

6. A blank as defined in claim 1, wherein the bottom wall portion comprises two sections, with the sections each being connected along a fold line with a side wall panel.

7. A blank as defined in claim 6, wherein one of the bottom wall sections is connected with a panel along the longitudinal fold line, and wherein the bottom tab is connected with the other of said sections.

8. A blank as defined in claim 6, wherein the bottom wall sections are triangular in shape, and each triangular section has an extension projecting therefrom.

9. A blank as defined in claim 6, wherein the bottom wall sections are quadrilateral in shape and an extension projects from the opposite edges of each of the quadrilateral sections.

10. A blank as defined in claim 9, wherein the extensions projecting from one of the quadrilateral sections are severed from the adjacent side wall panels.

11. A blank as defined in claim 9, wherein the width of the quadrilateral sections is slightly greater than half the width of a full side wall panel.

12. A blank as defined in claim 1, wherein the side wall panels at the opposite edges of the sheet are each approximately half the width of the remaining side wall panels.

13. A blank as defined in claim 1, wherein all of the panels are rectangular and the panel adjacent to the one to which said bottom wall portion is hinged has a transverse fold line medially of its side edges.

14. A blank as defined in claim 1, wherein the sheet has three triangular wall panels, and wherein the bottom wall portion is triangular, and wherein one of the side wall panels adjacent to the one to which the bottom wall portion is connected has a fold line extending from its apex to the mid point of its base.

15. A multi-sided container structure having at least three side walls, one of said side walls having a tab securing the same to an adjacent side wall; a polygonal bottom wall connected with at least one of said side walls along a longitudinal fold line defining one of its sides and having a tab connected thereto along a fold line, said bottom wall being formed by two sections connected together; each section having an extension projecting from at least one side wall thereof and joined thereto along a longitudinal fold line and each extension including a triangular bottom wall portion and a flap connected along a fold line to said triangular bottom wall portion, said flap portion having an edge severed from an adjacent panel and adapted to serve as a stabilizing foot upon assembly of the structure.

16. A container as defined in claim 15, wherein the two bottom sections are connected together along a fold line.

17. A container as defined in claim 15, wherein the two bottom sections are separate and are connected together by tabs.

18. A container as defined in claim 15, wherein the bottom sections are connected to adjacent side walls of the container.

19. A container as defined in claim 15, wherein the bottom sections are connected to opposed side walls of the container.

20. A container as defined in claim 15, wherein the bottom wall portion connected to the bottom section is triangular and wherein the flap connected to said bottom wall portion extends horizontally beneath one side wall and serves as a stabilizing foot for the structure.

21. A container as defined in claim 20, wherein the extension has a lock-cut along the fold line between the bottom wall portion and the flap to provide a locking tab on the flap when serving as a stabilizing foot, for retaining said one side wall between said locking tab and said bottom wall portion.

22. A container as defined in claim 15, wherein the bottom wall portion connected to the bottom section is triangular and wherein the flap connected to said bottom wall portion is folded upwardly and secured against a side wall to retain the structure in permanently erected condition.

23. A container as defined in claim 22, wherein the extension is connected along a fold line to the base of each triangular section.

24. A container as defined in claim 15, wherein the bottom wall is foldable upwardly into the structure to render the structure collapsible and expansible.

25. A container as defined in claim 15, wherein the bottom wall is dimensioned to provide an arch resisting collapse of the structure, when the structure is in expanded condition.

26. A container as defined in claim 15, wherein the bottom wall comprises two generally quadrilateral sections, and wherein each of said sections has an extension at its opposite sides.

27. A container as defined in claim 26, wherein the bottom wall is integral and divided into two bottom wall sections by a medial fold line.

28. A container as defined in claim 15, wherein the bottom wall comprises two quadrilateral sections, and wherein each of said sections has one longitudinal edge thereof connected with a side wall along a fold line, and wherein each of said sections has a tab along its other longitudinal edge, and wherein the tabs are connected to the sections along a fold line and are secured together.

29. A container as defined in claim 28, wherein the transverse dimension of the quadrilateral section is greater than half the width of a side wall.

30. A container as defined in claim 15, wherein the bottom wall comprises two sections asymetrically arranged along a fold line, and wherein each section has one of its longitudinal edges joined with a side wall along a fold line, and wherein each section has an extension at one end thereof.

31. A container as defined in claim 15, wherein the bottom wall is triangular and wherein the base of the triangle is of slightly greater length than the sides of said triangle, and wherein the length of the sides of said triangle is equal to the width of a side wall of the container.

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