Nov. 15, 1927.

1,649,088

E. O. TINSLEY

POLYGONAL CONTAINER

Filed June 22, 1926

3 Sheets-Sheet 1

Fig. 1

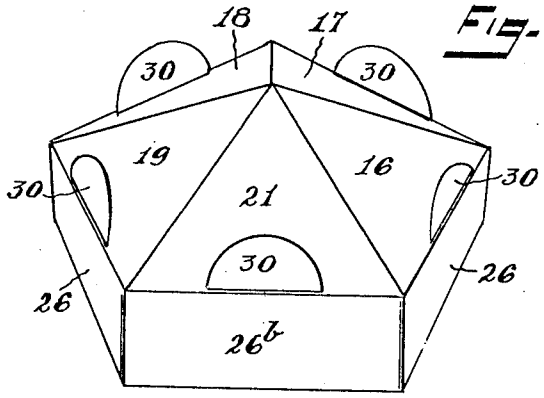


Fig. 2

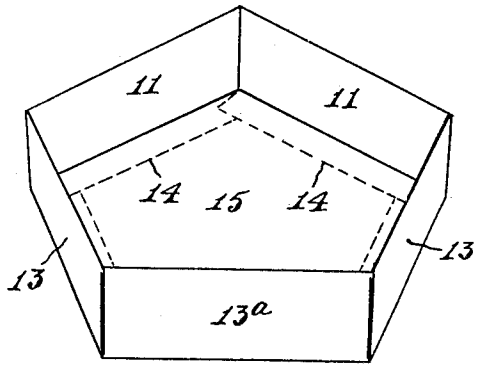
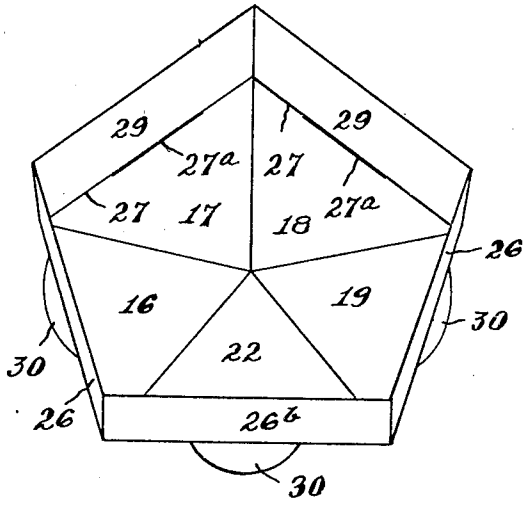


Fig. 3



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Fig. 5

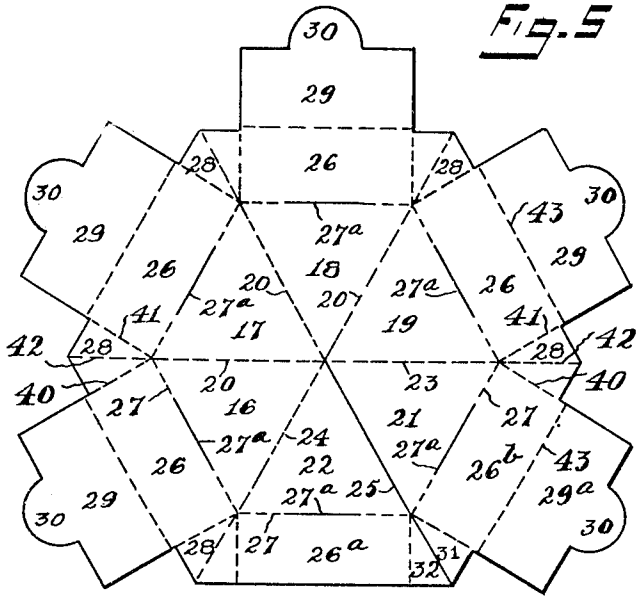
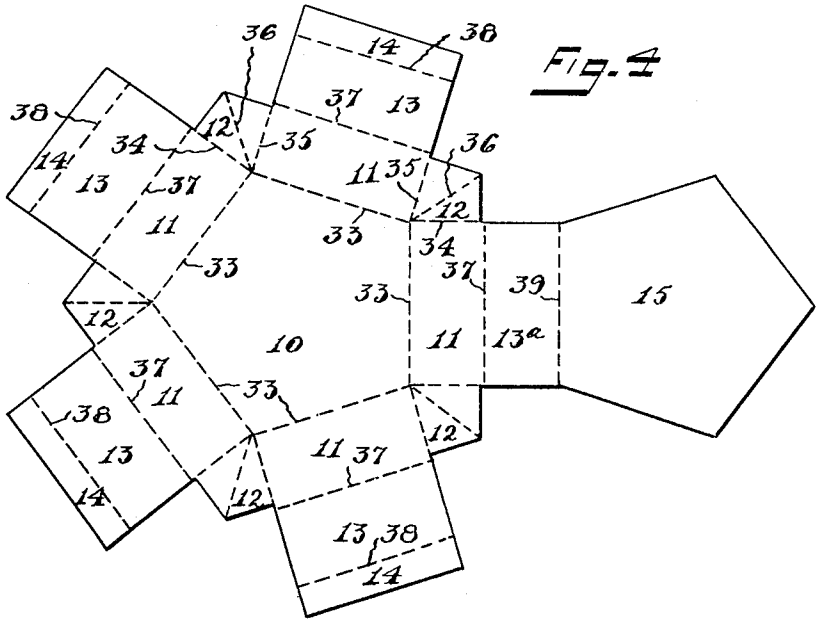


Fig. 4



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3 Sheets-Sheet 3

Fig. 6

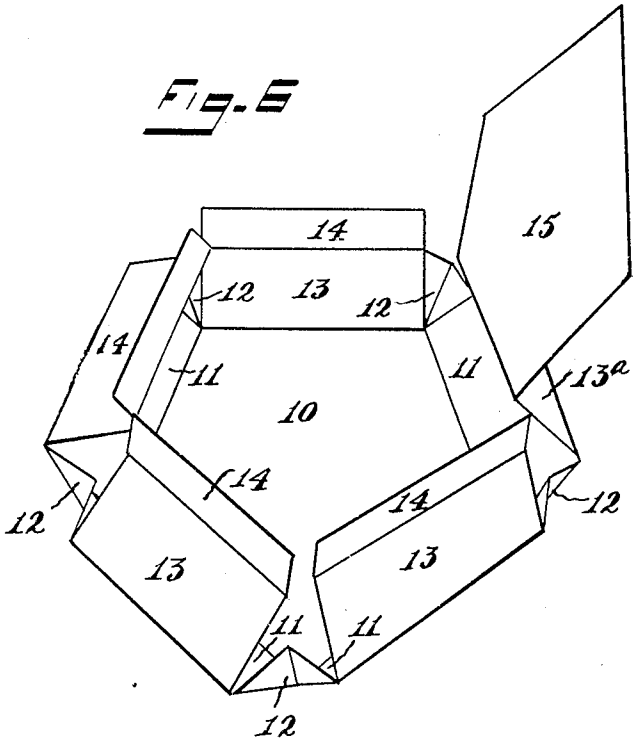
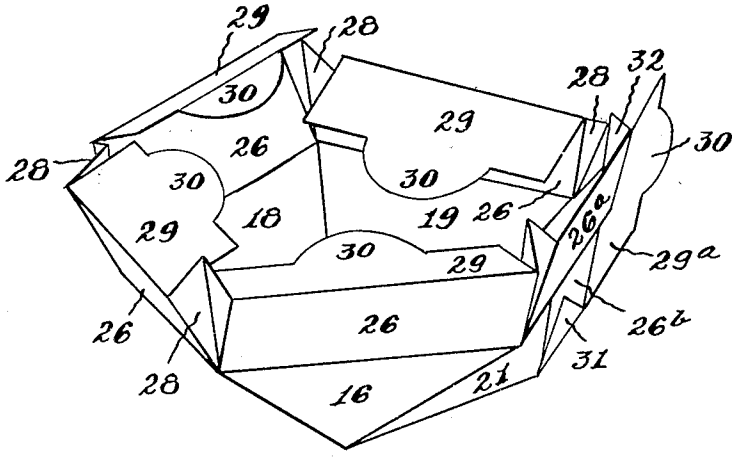


Fig. 7



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Patented Nov. 15, 1927. 1,649,088

UNITED STATES PATENT OFFICE.

EDWARD O. TINSLEY, OF NEW YORK, N. Y., ASSIGNOR TO ROBERT GAIR COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

POLYGONAL CONTAINER.

Application filed June 22, 1926. Serial No. 117,776.

The present invention relates to collapsible boxes or boxes formed by folding a blank of suitable material, and one object of the invention is to provide a box of the character mentioned which in addition to being of novel construction and unusual appearance is strong, durable and efficient.

Another object of the invention is to provide a box formed by folding, one of the uses of the box being as a container for confectionery or candies, the box because of its unusual appearance and novel construction at once drawing the attention, particularly of children, to the box and its contents and conducing to the sale thereof.

Another object of the invention is to provide a box formed by folding and which when in assembled form resembles a circus tent or "big top", and upon the exposed portions of which, such as the side walls, various pictorial or descriptive matter typical of the circus may be displayed and serving to draw attention to the box and its contents.

A feature of the invention is the provision of a foldably formed polygonal container or receptacle portion of the box having a polygonal outer bottom to each of the edge portions of which an outer side wall portion is foldably connected, each of these outer side wall portions being foldably connected at its ends to the adjacent outer side wall portion by web closure means and each of the outer side wall portions having foldably connected to one side thereof and extending longitudinally of the side a free-hanging inner side wall portion. Each of these free-hanging inner side wall portions, except one thereof, has a flap foldably connected to one of its sides and extending longitudinally of the side, this flap when the container is in assembled form engaging the outer bottom for retaining the outer and inner side wall portions in assembled relation. The excepted inner side wall portion has foldably connected to one side thereof, in the place of said flap, a polygonal free-hanging inner bottom which substantially conforms in shape and size to the shape and size of the outer bottom and which engages, when the container is in assembled form, over the outer bottom for providing a double bottom for the container, the before mentioned flaps being disposed between the two bottoms and held in place by the inner bottom.

Another feature of the invention is the provision of a foldably formed polygonal cover for the container or receptacle portion of the box, this cover consisting of outer and inner side walls and a top, the top being substantially conical when the cover is in assembled form and having a plurality of faces which in number correspond to the number of exposed outer side walls of the cover. One of these top faces when the container is in assembled form consists of two overlapping outer and inner side wall and top face portions, the number of outer and inner side wall and top face sections of the blank for forming the cover exceeding by one outer and inner side wall and top face section the number of outer side walls and top faces exposed when the cover is in assembled form, the above mentioned excess in number of outer and inner side wall and top face sections and overlapping construction providing a novel, convenient and economical way of erecting from the blank the polygonal cover having a lesser number of exposed outer side walls than the number of outer side wall sections shown on the blank and the substantially conical top having a lesser number of exposed top faces than the number of top face sections shown on the blank and necessary to form a cover for cooperating with the container to provide a box resembling a circus tent.

Another feature of the invention is the use of tabs on the inner side wall portions of the cover which are engageable in cuts in the fold lines between the bottoms of the top faces of the cover and the outer side wall portions for retaining the outer and inner side wall portions in assembled relation, these tabs extending through said cuts and being exposed adjacent to the top faces of the cover in upstanding positions and conducing to the resemblance of the box to a circus tent.

I attain the above objects, and such other objects as may later appear herein, by the invention one of the possible embodiments of which is described by way of example in the subjoined specification and shown in the accompanying drawings, and while herein details of the invention are described the invention is not limited to these, since many and various changes may be made without departing from the spirit and scope of the invention as claimed.

In the accompanying drawings Fig. 1, is

a perspective elevation of the box in assembled form,

Fig. 2, is a perspective view of the container portion of the box,

Fig. 3, is a perspective view of the cover portion of the box, showing the interior of the cover portion.

Fig. 4 is a view of the blank for forming the container portion,

Fig. 5, is a view of the blank for forming the cover portion,

Fig. 6, is a view of the container portion in partly folded form, and

Fig. 7, is a view of the cover portion in partly folded form.

Similar reference characters denote similar parts throughout the several views.

Referring to Fig. 6, the container portion of the box has a pentagonal outer bottom 10 to the peripheral side edges of which the outer side walls 11 are foldably connected, these outer side walls being connected to each other at their ends by the web closure members 12. The outer side walls 11 have foldably connected to one of their sides the free-hanging inner side walls 13—13ª all of which, except the inner side wall 13ª, have foldably connected thereto the flaps 14. The inner side wall 13ª has foldably connected to one side thereof, in the place of a flap, the free-hanging, pentagonal inner bottom 15, which in size is substantially the same as the outer bottom 10 and intended when the container is in assembled form to be pressed down into the container in close relation to the outer bottom.

To assemble the container the outer side walls 11 are folded to positions at right angles to the outer bottom 10, the inner side walls 13 are folded inwardly over the outer side walls, the web closure members 12 being received between the outer side walls 11 and the inner side walls 13, and the flaps 14 are folded at right angles to the inner side walls and pressed down upon the outer bottom 10, thereby retaining the outer and inner side walls in folded relation. The inner side wall 13ª is folded over inwardly over the adjacent outer side wall 11 and the inner bottom 15 is pressed down over the outer bottom 10 and over the flaps 14 thereby retaining the flaps 14 in engagement with the outer bottom 10 and contributing to retain the outer and inner side walls in folded relation and providing a pentagonal container such as shown in Fig. 2.

Referring to Fig. 5, the cover for the container portion of the box has a top composed of six top face portions, four of these top face portions 16, 17, 18 and 19 being foldably connected to each other by the fold lines 20 radiating from the center of the top and bisecting the angles formed at the peripheral edges of the top, it being understood that for convenience these parts of the top are described as top face portions, it being noted that it is the exterior side of these portions, except one of the portions, which constitute the top faces which are exposed when the cover is in assembled form and has a conical top, and for this reason the same reference numerals are given in the views to the exposed top faces of the assembled cover as to these top face portions.

The top face portions 21 and 22 are respectively foldably connected along their sides to the top face portions 19 and 16 by the fold lines 23 and 24 and are separated along their sides from each other by the radiating cut 25 which extends from the center of the top and bisects the angle formed at the peripheral edges of the top face portions 21 and 22. The top face portions 16 to 19 inclusive have foldably connected thereto at their peripheral edges the outer side walls 26, and the top face portions 21 and 22 have foldably connected thereto at their peripheral edges the outer side walls 26ª and 26ᵇ, there being longitudinal slits 27ª in the fold lines 27 between all the top face portions and the outer side walls. The outer side walls 26 are connected at their ends by the web closure members 28, the cut 25 in the case of the outer side walls 26ª and 26ᵇ being extended so that it separates into two parts the closure member between the outer side walls 26ª and 26ᵇ. The free-hanging inner side walls 29 are foldably connected to the outer side walls 26 and the free-hanging inner side wall 29ª is foldably connected to the outer side wall 26ᵇ, it being noted that the outer side wall 26ª is not connected to an inner side wall. The inner side walls 29 and 29ª have on the free side edges thereof the tabs 30 which are engageable in the slits 27ª.

To assemble the cover the outer side walls, with the exception of 26ª and 26ᵇ, are folded to positions at angles to the adjacent top face portions, the inner side walls 29, with the exception of the inner side wall 29ª, are folded inwardly and over the outer side walls, the web closure members 28 being received between the outer and inner side walls, and the tabs 30 are inserted from the inner side of the top through the slits 27ª and drawn outwardly into exposed upstanding positions, thereby retaining the outer and inner side walls in assembled relation. The top face portion 22 and the outer side wall 26ª are drawn over sidewise so that the top face portion 22 and the outer side wall 26ª, when viewed from the interior of the cover, overlap the top face portion 21 and the outer side wall 26ᵇ, and the slits 27ª in the fold lines between there top face portions and outer side walls are in registry, the portion 31 of the cut closure member of the outer side wall 26ᵇ being received between the overlapped outer side walls 26ª and 26ᵇ

and the portion 32 of the cut closure member of the outer side wall 26[a] being disposed flat against the web closure member 28 which is received between the next adjacent outer and inner side walls 26 and 29. The tab 30 on the inner side wall 29[a], which is appurtenant to the outer side wall 26[b], is inserted from the interior of the cover through the above mentioned registering slits 27[a] and drawn outwardly into upstanding position, thereby retaining the overlapping top face portions 21 and 22 and the outer side walls 26[a] and 26[b] and the inwardly folded inner side wall 29[a] in assembled relation, there thus being one top face and one outer side wall which are not exposed, and completing the formation of the cover, such as shown in Figs. 1 and 3, having five exposed outer side walls and the conical top provided with five exposed top faces adjacent to the exposed outer side walls and adapted for fitting over the five sided container and cooperating therewith for providing a box such as shown in Fig. 1 resembling the tent of a circus.

Referring to Fig. 4, the blank, for forming the container by folding the blank on the scoring thereof, has the main portion constituting the pentagonal outer bottom section 10, the outer side wall sections 11 connected to the peripheral edges of the outer bottom section 10 along the score lines 33, the web closure sections 12 connected to the ends of the outer side wall sections 11 along the score lines 34 and 35 and foldable on the score lines 36, the free-hanging inner side wall sections 13 and 13[a] connected to one of the sides of the outer side wall sections along the score lines 37, the flap sections 14 connected to one of the sides of all of the inner side wall sections 13, except the inner side wall section 13[a], along the score lines 38, and the free-hanging pentagonal inner bottom section 15 connected to one side of the inner side wall section 13[a] along the score line 39.

Referring to Fig. 5, the blank, for forming the cover for the container by folding the blank on the scoring and cuts thereof, has the main portion constituting the hexagonal top section comprising the top face sections 16, 17, 18 and 19 connected to each other at their sides along the score lines 20 and the top face section 21 connected to the top face section 19 along the score line 23 and the top face section 21 connected to the top face section 16 along the score line 24, the top face sections 21 and 22 being separated along their adjoining sides by the cut 25, the outer side wall sections 26, 26[a] and 26[b] connected at one of their sides to the top face sections along the score lines 27 having the longitudinal slits 27[a] therein, the web closure sections 28 connected to the ends of the outer side wall sections 26 along the score lines 40 and 41 and foldable on the score lines 42, the web closure section appurtenant to the outer side wall sections 26[a] and 26[b] being cut by an extension of the cut 25, the free-hanging inner side wall sections 29 and 29[a] connected to the outer side wall sections along the score lines 43, the outer side wall section 26[a] having no inner side wall section connected thereto, and the tab sections 30 on the free edges of the inner side wall sections.

What I claim and desire to protect by Letters Patent is:

1. In a foldably formed box, an open topped container, and a slip over cover for the container having a side wall portion, a substantially conical top portion connected to the side wall portion and extending upwardly therefrom and provided with locking tabs on the upper edge of the side wall portion extending upwardly through the cover at the line of connection of the side wall and top portions for retaining said portions in assembled folded relation.

2. In a foldably formed box, an open topped container polygonal in cross-section, and a slip over cover for the container having a side wall portion polygonal in cross-section, a substantially conical top portion polygonal in cross-section connected to the side wall portion and extending upwardly therefrom and locking tabs appurtenant to the side wall portion and extending upwardly through the cover at the line of connection of the side wall and top portions for retaining said portions in folded assembled relation.

3. In a foldably formed box, a cover having a polygonal top portion, side walls connected along one of their sides to the peripheral edges of the top portion, the top portion when the cover is in assembled form being of substantially conical shape, and web closure means for connecting the side walls at the ends of the side walls, said side walls when the cover is in assembled form extending downward at an angle greater than a right angle relative to the plane of the inclination of said top portion and providing vertical side walls for the cover.

4. In a foldably formed box, a cover having a polygonal top portion, outer side walls connected along one of their sides to the peripheral edges of the top portion, inner side walls connected to the sides of the outer side walls opposite to the first mentioned sides, and means appurtenant to the inner side walls cooperating between the outer side walls and said top portion for retaining the outer and inner side walls in assembled relation when the cover is in assembled form, said top portion when the cover is in assembled form being of substantially conical shape and the outer and inner side walls being disposed adjacent to each other and

extending downward at an angle greater than a right angle relative to the plane of the inclination of said top portion and providing vertical side walls for the cover.

5. In a foldably formed box, a cover having a polygonal top portion, outer side walls connected along one of their sides to the peripheral edges of the top portion, inner side walls connected to the sides of the outer side walls opposite to the first mentioned sides, and means on the inner side walls engageable with means disposed between the connected sides of the outer side walls and said top portion for retaining the outer and inner side walls in assembled relation when the cover is in assembled form, said top portion when the cover is in assembled form being of substantially conical shape and the outer and inner side walls being disposed adjacent to each other and extending downward at an angle greater than a right angle relative to the plane of the inclination of said top portion and providing vertical side walls for the cover.

6. In a foldably formed box, a cover having a polygonal top portion, outer side walls connected along one of their sides to the peripheral edges of the top portion, web closure members for connecting the outer side walls at the ends of the outer side walls, inner side walls connected to the sides of the outer side walls opposite to the first mentioned sides, and means on the inner side walls engageable with means disposed between the connected sides of the outer side walls and said top portion for retaining the outer and inner side walls in assembled relation when the cover is in assembled form, said top portion when the cover is in assembled form being of substantially conical shape and the outer and inner side walls being disposed adjacent to each other and extending downward at an angle greater than a right angle relative to the plane of the inclination of said top portion and providing vertical side walls for the cover, said web closure members when the cover is in assembled form being received between the outer and inner side walls.

7. In a foldably formed box, a cover having a polygonal top portion, outer side walls connected along one of their sides to the peripheral edges of the top portion, web closure members for connecting the outer side walls at the ends of the outer side walls, inner side walls connected to the sides of the outer side walls opposite to the first mentioned sides, and tabs on the inner side walls engageable in slits in the line of connection of the outer side walls to said top portion for retaining the outer and inner side walls in assembled relation when the cover is in assembled form, said top portion when the cover is in assembled form being of substantially conical shape and the outer and inner side walls being disposed adjacent to each other and extending downward at an angle greater than a right angle relative to the plane of the inclination of said top portion, said web closure members when the cover is in assembled form being received between the outer and inner side walls, said tabs when the cover is in assembled form extending upward externally of said top portion at an angle less than a right angle relative to the plane of the inclination of the top portion.

8. In a foldably formed box, a cover having a hexagonal top portion consisting of six top faces four of which are connected to each other along their sides by fold lines radiating from the center of the top portion and two of which are connected along one of their sides to the next adjacent top faces by fold lines similar to the first mentioned fold lines and are separated from each other along their other sides by a cut radiating from the center of the top portion, and side walls connected along one of their sides to the ends of all the top faces, the cut-separated top faces and the side walls connected to the ends thereof being disposable in superimposed relation to each other for providing the top portion with a substantially conical shape when the cover is in assembled form.

9. In a foldably formed box, a cover having a hexagonal top portion consisting of six top faces four of which are connected to each other along their sides by fold lines radiating from the center of the top portion and two of which are connected along one of their sides to the next adjacent top faces by fold lines similar to the first mentioned fold lines and are separated from each other along their other sides by a cut radiating from the center of the top portion, outer side walls connected along one of their sides to the ends of all the top faces by fold lines having longitudinal slits therein, and free-hanging inner side walls connected to five of the outer side walls along the sides of the outer side walls opposite to the first mentioned sides and having tabs on their edges engageable with said slits, the sixth outer side wall being free of an inner side wall and being one of the outer side walls which are connected to the top faces separated by said cut.

10. In a foldably formed box, a cover having a hexagonal top portion consisting of six top faces four of which are connected to each other along their sides by fold lines radiating from the center of the top portion and two of which are connected along one of their sides to the next adjacent top faces by fold lines similar to the first mentioned fold lines and are separated from each other along their other sides by a cut radiating from the center of the top portion, outer side walls connected along one of their sides to the ends of all the top faces by fold lines

having longitudinal slits therein, web closure members for connecting the outer side walls at the ends of the outer side walls, the web closure member at the adjacent ends of the outer side walls appurtenant to the top faces separated by said cut being separated into two parts by an extension of said cut, and free-hanging inner side walls connected to five of the outer side walls along the sides of the outer side walls opposite to the first mentioned sides and having tabs on their edges engageable with said slits, the sixth outer side wall being free from an inner side wall and being one of the outer side walls which are connected to the top faces separated by said cut.

11. A blank for forming a cover by folding the blank on the score lines and cuts thereof and consisting of a hexagonal main portion forming a top section having six top faces, four of said top faces being defined from each other by score lines radiating from the center of the top section and two of said top faces being defined from the top faces adjacent to one of their sides by score lines radiating from the center of the top section and separated from each other by a cut radiating from the center of the top section, outer side wall sections connected along their inner sides to the peripheral edges of the top section by score lines having longitudinal slits therein, and free-hanging inner side wall sections connected to all except one of the outer side wall sections by score lines along the outer sides of the outer side wall sections and having tabs on their free edges engageable with said slits, the excepted outer side wall section being appurtenant to one of the top faces separated by said cut and being free of an inner side wall section.

12. A blank for forming a cover by folding the blank on the score lines and cuts thereof and consisting of a hexagonal main portion forming a top section having six top faces, four of said top faces being defined from each other by score lines radiating from the center of the top section and two of said top faces being defined from the top faces adjacent to one of their sides by score lines radiating from the center of the top section and separated from each other by a cut radiating from the center of the top section, outer side wall sections connected along their inner sides to the peripheral edges of the top section by score lines having longitudinal slits therein, web closure members connected by score lines to the ends of the outer side wall sections, the web closure member at the ends of the outer side wall sections separated by said cut being separated into two parts by an extension of said cut, and free-hanging inner side wall sections connected to all except one of the outer side wall sections and having tabs on their free edges engageable with said slits, the excepted outer side wall section being appurtenant to one of the top faces separated by said cut and being free of an inner side wall section.

13. In a foldably formed box, an open topped container, and a cover for the container having a side wall portion, a substantially conical top portion connected to the side wall portion and extending upwardly therefrom and locking tabs on the side wall portion extending upwardly through the cover at the line of connection of the side wall and top portions for retaining the top and side wall portions in assembled folded relation, said side wall portion and locking tabs having exposed surfaces for displaying characteristic matter thereon.

14. A box embodying an open-topped container formed by folding a blank and having side walls, a tent-like cover formed by folding a blank and having a conical top for providing top closure for the container and having side walls connected to the conical top and removably slidably engaging over the side walls of the container for enclosing the container, and tab and slot means cooperating between the side walls of the cover and top of the cover for retaining the side walls and top of the cover in folded assembled relation, said tab means providing exposed surfaces for display of characteristic matter thereon.

Signed at New York in the county of New York and State of New York this 21st day of June, A. D. 1926.

EDWARD O. TINSLEY.