Nov. 3, 1942. W. R. VAN WINKLE 2,300,473

ORNAMENTAL DISPLAY OR CONTAINER STRUCTURE

Filed Feb. 20, 1939 3 Sheets-Sheet 1

FIG. 1

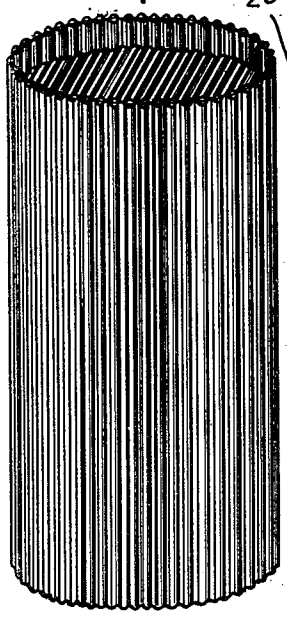


FIG. 2

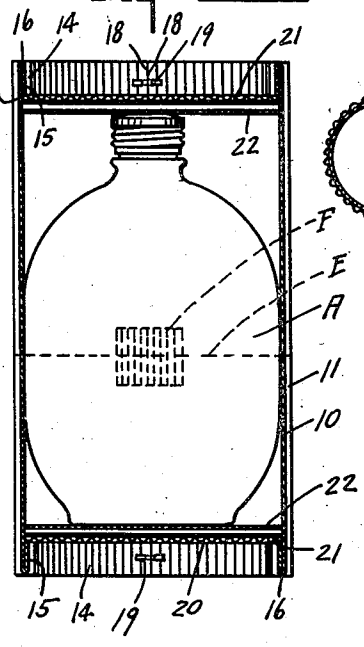


FIG. 3

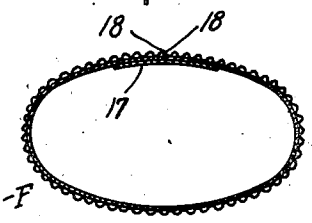


FIG. 4

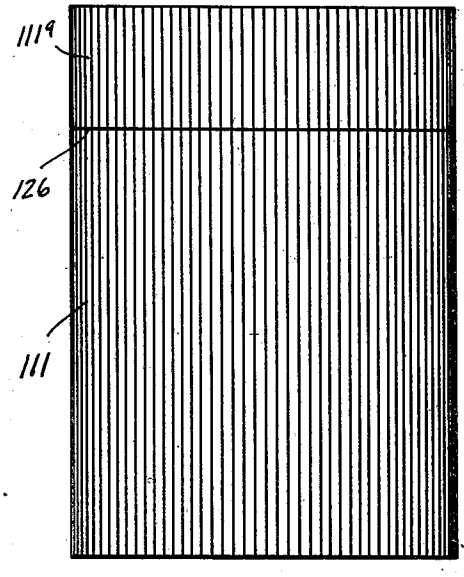
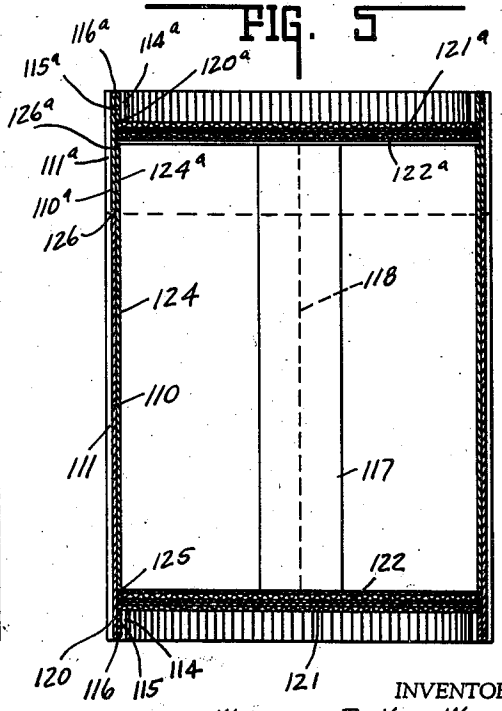


FIG. 5



INVENTOR.
WILLIAM R. VAN WINKLE.
BY Lockwood, Goldsmith & Galt.
ATTORNEYS.

Nov. 3, 1942. W. R. VAN WINKLE 2,300,473

ORNAMENTAL DISPLAY OR CONTAINER STRUCTURE

Filed Feb. 20, 1939 3 Sheets-Sheet 2

FIG. 6

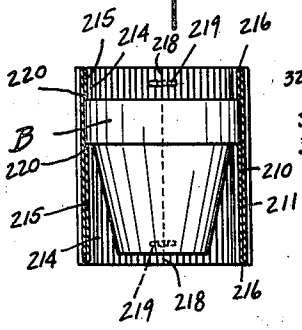


FIG. 7

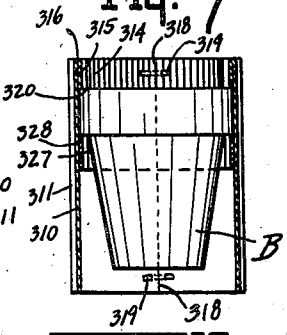


FIG. 8

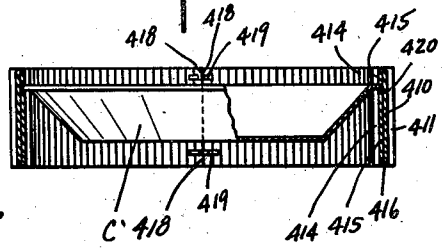


FIG. 9

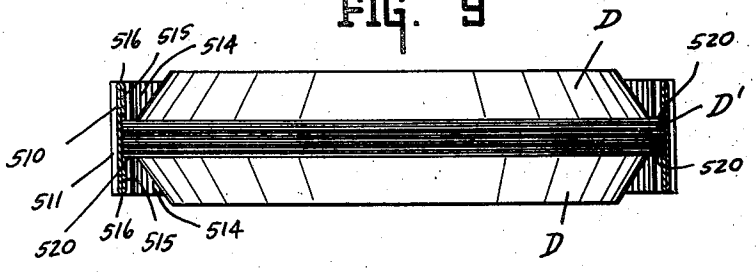
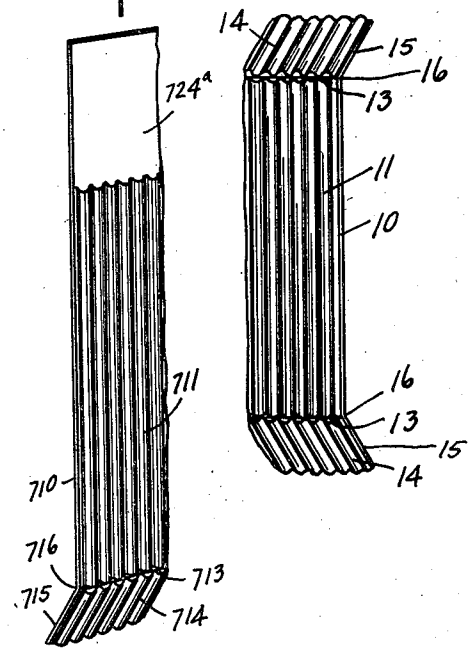
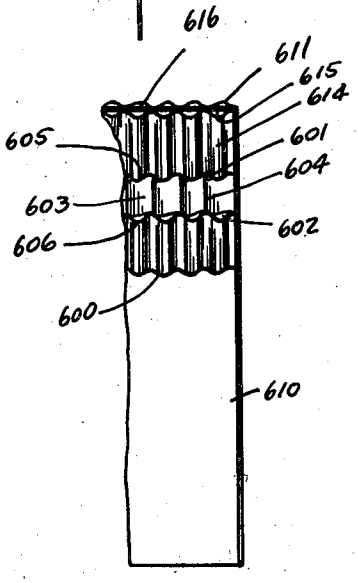


FIG. 10

FIG. 11

FIG. 12





INVENTOR.
WILLIAM R. VAN WINKLE.
BY Lockwood, Goldsmith & Galt.
ATTORNEYS.

Nov. 3, 1942. W. R. VAN WINKLE 2,300,473

ORNAMENTAL DISPLAY OR CONTAINER STRUCTURE

Filed Feb. 20, 1939 3 Sheets-Sheet 3

FIG. 13

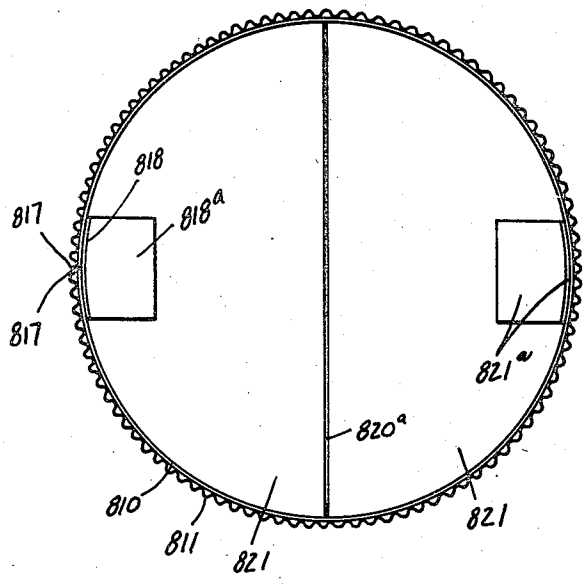


FIG. 14

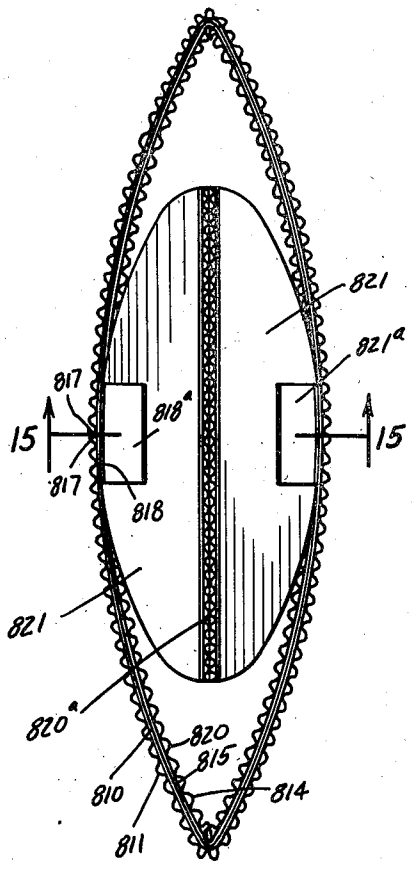
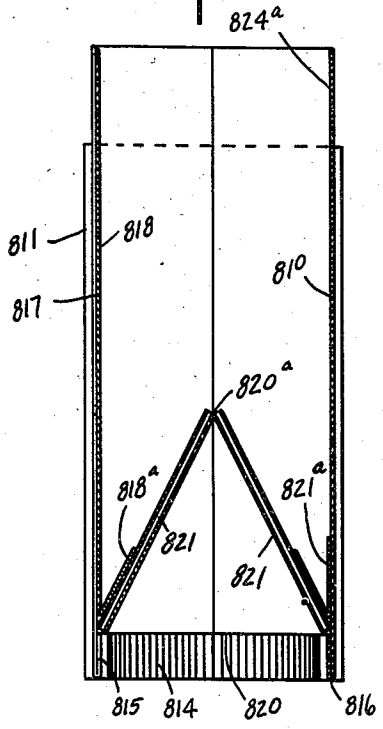


FIG. 15



INVENTOR.
WILLIAM R. VAN WINKLE.
BY Lockwood, Goldsmith & Galt.
ATTORNEYS.

Patented Nov. 3, 1942 2,300,473

UNITED STATES PATENT OFFICE

2,300,473

ORNAMENTAL DISPLAY OR CONTAINER STRUCTURE

William R. Van Winkle, Marion, Ind., assignor to Indiana Fibre Products Company, Marion, Ind., a corporation

Application February 20, 1939, Serial No. 257,326

2 Claims. (Cl. 229—4.5)

This invention relates to an ornamental display and/or container arrangement.

The chief object of the invention is to provide a display or container of the character indicated and from corrugated board and in tubular formation.

The term "tubular formation" is intended to differentiate from so-called corrugated cartons wherein certain flaps are provided at one or both ends of a box structure and which form closures therefor and is distinguished therefrom by the latter including two or more cooperating flaps forming the end closure.

The chief feature of the invention, as stated, consists in the utilization of corrugated board and herein the same is preferably, but not necessarily directed to what is termed single face corrugated board.

Single face corrugated board, as the term is herein employed, as well as in the paperboard industry, is intended to comprehend a paper board material having a flat sheet, commonly called the liner, and the corrugated sheet, commonly called the corrugated layer, the two being adhesively or otherwise suitably secured together, the liner sheet maintaining the corrugations in their proper spaced relation.

Since this material boardly is old and well known in the art, no further reference thereto will be had to its production. However, it is not to be understood that by the following description, referring to single face corrugated board, that double face corrugated board cannot be successfully employed as well for the invention readily lends itself to the same. Double face corrugated board includes two spaced liners between which is secured the corrugated layer. Corrugated board may be of additional layer character as is well known in the art of corrugated manufacture.

The present invention provides, however, that when double corrugated board is employed, the container or display is of relatively light weight yet has the strength of almost solid board of similar thickness or caliper. Furthermore, corrugated board when employed in the present invention, as hereinafter pointed out, has two functions, the first of which is common to all corrugated board, to-wit, its cushioning or shock absorbing power. The second function which single face corrugated has when utilized as hereinafter described, is that the exterior of the display or container device presents an ornamented surface which readily lends itself to the reception of unique and distinctive advertising display and legending.

The chief feature of the invention basically is the utilization of corrugated board to form a tubular formation and the slitting of the corrugated layer and all other layers exteriorly of an inner liner layer and then the inturning on the liner of the slit end portion, two adjacent longitudinal ends of the board being in substantial abutting relation and suitably secured in that relation to form the tubular formation.

Other objects and features will be set forth more fully hereinafter in the following description, and will also be readily apparent from an examination of the several figures of the drawings, wherein several embodiments of the invention are illustrated by way of example only.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings,

Fig. 1 is a perspective view of one embodiment of the invention.

Fig. 2 is a vertical sectional view through the same.

Fig. 3 is a transverse sectional view through the container type embodiment of the invention shown in Figs. 1 and 2, the article being omitted therefrom.

Fig. 4 is an elevational view of another embodiment of the invention.

Fig. 5 is a vertical sectional view through the same.

Fig. 6 is a central sectional view through a third embodiment of the invention.

Fig. 7 is a view similar to Fig. 6 and of a still further form of the invention.

Fig. 8 is a view similar to Figs. 6 and 7 and of a still further embodiment of the invention.

Fig. 9 is a sectional view similar to Figs. 6 to 8 and of a still further embodiment of the invention.

In Figs. 6 to 9 inclusive, the articles or contents are shown in elevation.

Fig. 10 is a perspective view of a portion of a single face corrugated board, preliminary to final formation into tubular form.

Fig. 11 is a sectional view of a portion of a modified form of the invention looking at the interior of the same.

Fig. 12 is a view similar to Figs. 10 and 11 and of another and modified form of single face corrugated board.

Fig. 13 is a top plan view of a modified form of the invention.

Fig. 14 is a similar view showing the same partially collapsed.

Fig. 15 is a vertical sectional view taken on line 15—15 of Fig. 14 and in the direction of the arrows.

In Fig. 2 of the drawings, A indicates an article such as a bottle, or the like. 10 indicates the interiorly positioned liner layer and 11 indicates the relatively exteriorly positioned corrugated layer. It will be noted the corrugations are substantially parallel to the longitudinal axis of the container structure.

Reference will be had now more particularly to Fig. 10. In this figure, the numeral 10 indicates the liner layer and 11 the corrugated layer. Adjacent each end and substantially transverse to the direction of corrugations and to the longitudinal axis of the container—see Fig. 2—is a slit arrangement 13. This slit arrangement 13 adjacent each end provides end portions 14 of corrugated character supported by the liner portions 15. The slit 13 merely severs the corrugations but does not sever the liner and consequently the liner 10 as at 16 may serve as a hinge connection.

The strip of corrugated board cut to proper size and properly slit as by parallel slits 13, is arranged in tubular formation and secured in said relation by suitable means. Herein—see Fig. 3, a strip of gummed tape or paper tape 17 overlaps the adjacent ends 18 which are substantially abutting of the tubular container.

In certain forms of the invention, this strip 17 is adhesively secured to one liner and is adapted to have its exposed end moistened and the other end of the tubular formation brought into abutment and adhesively united in butt joint relation in tubular formation by the overlapping portion of said tape. Other securing means may be employed, such as for example, stitching or stapling, these being relatively light wire arrangements substantially well known in the art, and the rear end of the same is here shown clearly at 19 in Fig. 2.

Following the formation of the corrugated sheet into tubular formation, there is turned upwardly and inwardly the lower end portion about the hinge 16. The upper edge of the corrugations on this inwardly directed portion provides a shoulder 20. An end closure in outline corresponding to the outline of the container for tubular formation may then be inserted from the upper end and engage said shoulder 20. This end closure is herein illustrated as being of multiple layer construction. The lower layer 21 is of single face corrugated character, thereby exposing a corrugated surface at this end. Superimposed layer bearing thereon may be a double face corrugated layer 22. It will be noted—see Fig. 2—that the two layers are so arranged that the direction of corrugations is substantially transverse to each other.

If desired, this end closure construction may be inserted in a tubular formation prior to the inturning before mentioned, and then following inturning, the adjacent edges may be secured together by the stapling 19, as illustrated. The article or contents A may be inserted into the container from the upper end following which there is inserted a multiple layer end closure including the innermost double faced corrugated layer 22 and the uppermost single face corrugated layer 21, the corrugated face thereof being exteriorly exposed. This end closure rests upon the contents or article within the container. Then the upper end of the container is turned inwardly, as shown in Fig. 2, and this locks the upper closure in carton or package closing position, and the inturned ends may be suitably secured together, as indicated at 19, which is a representation of the exposed and inwardly directed ends of the clip or staple construction.

The resulting construction produces a container which is of highly ornamented character, the ends of which are protected and which container is of shock absorbing character. It will be readily apparent in the formation of the corrugated board, the desired advertising matter, legending and the like, may be printed on what will ultimately be the exterior surface of the container.

In Figs. 4 and 5 a modified form of the invention is illustrated and herein numerals of the 100 series indicate like or similar parts. This form of the invention differs from that shown in Figs. 1 to 3 in that Figs. 1 to 3 disclose what may be termed a permanently sealed container. Figs. 4 and 5 illustrate a container of cover type, wherein the cover is readily removable. Herein the container is made of two sheets of corrugated paper board stock, one forming the bottom of the container and the other forming the top of the container. The bottom of the container includes the interior liner 110 and the relatively exterior corrugated layer 111. The lower end thereof is slit as indicated at 13 in Fig. 10 and the inturned liner portion 115 lies adjacent the liner portion 110, being hinged thereto as at 116.

The corrugated inturned portion 114 provides a shoulder 120 adapted to support the end closure, the construction being substantially the same as the end closure shown in Fig. 2, to-wit, a single face corrugated end closure 121 and the double faced corugated closure layer 122, the corrugations in the two layers being directed angularly of each other. The two adjacent ends of the corrugated layer are brought together and suitably secured together in butt joint relation as by the tape 117, the abutting ends being indicated by the numeral 118.

The top of the container shown in Figs. 4 and 5 is substantially the same as the bottom, to-wit, the same includes the inside liner 110*a*, the relative exterior corrugated outer layer 111*a*, the inwardly directed portion hingedly connected as at 116*a* to the exterior construction and providing the interior liner portion 115*a* and the interior positioned corrugated portion 114*a*. The latter at its end provides a shoulder 120*a*. The upper end closure forming the closure for the top structure herein, is shown including an inner double face corrugated layer 122*a* and an outer single face corrugated layer 121*a*, the latter having its corrugations exposed outwardly and the former having its corrugations concealed. It is, of course, to be understood a single faced corrugated layer may be employed for layer 122 shown. This end closure is suitably secured to the inside liner.

In the present form of the invention, there is provided an inner sleeve or shell 124, adhesively secured to the interior liner 110, which is shown bearing at 125 upon the lower end closure of the bottom structure, and the portion 124*a* projects above the top 126 of the bottom portion of the container. The top structure is adapted to telescopically receive the exposed portion 124*a* and the two corrugated portions peripherally abut each other in the plane indicated by the numeral 126. If desired, the upper end closure may

abut also the top of the inner shell 124a, as indicated at 126a.

The foregoing construction, therefore, provides a cover type container or one wherein access is readily had to the interior of the container.

Reference now will be had to Fig. 6, and herein numerals of the 200 series indicate like or similar parts. In this form of the invention and associated therewith, there is illustrated a flower pot B. Herein 210 indicates the liner of the tubular formation, 211 the outer corrugated layer thereon, 216 at each end indicating the hinge connection. The numerals 215 and 214 indicate the upper and lower inturned liner portions and corrugated portions, respectively, thereby providing parallel shoulders 220, as illustrated. The corrugated strip is arranged and secured in tubular formation. It then has its lower inturned end directed inwardly and upwardly and secured at 219. Then the flower pot is inserted from the top. Thereafter the upper inturned end is turned inwardly and downwardly and secured as indicated at 219. This locks the flower pot within the display container which, in the present instance, is of open end type.

For an understanding of the commercial use of this invention, the following is set forth by way of explanation only. Florists and the chain stores sell merely potted plants. These stores would provide the sales person with a hand stapler and when a potted plant is purchased, the sales person would take the strip of material, such as shown in Fig. 10, turn the lower end inwardly, as shown in Fig. 6. When this was formed, the sales person would staple the lower end of the display, as indicated by 219, near the lower end of Fig. 6. The plant is inserted. Thereafter the sales person would turn inwardly the upper portion of the strip and, of course, this would not interfere with the plant stem or the like, and when this was turned inwardly, the sales person would staple or stitch the same in locked relation, as indicated by the numeral 219 at the upper portion of Fig. 6. It will be apparent that in this form of the invention, the bottom of the pot does not engage the supporting surface upon which the tubular display or container is adapted to bear upon.

In Fig. 7 there is illustrated a modified form of the display container. In this form of the invention, numerals of the 300 series indicate like or similar parts. It is to be observed that in this form of the container, to effect a saving of board stock, the lower supporting shoulder is not formed by inturning a portion of the main board or strip. In this form of the invention, strips are utilized, cut to size but upon the interior liner 310 there is secured a strip of corrugated board 327 forming an upper shoulder 328 upon which the flange of the flower pot B is adapted to bear. When such a strip of board material is secured as at 319 in tubular formation, the pot is inserted from the top and then the upper end of the strip is turned inwardly about the hinge 316 so that the liner 315 is immediately adjacent the liner portion 310 and the corrugated portion 314 forms the lower shoulder or pot retaining shoulder 320. The abutting edges of the strip are suitably secured together as by the means indicated at 319 at the top of said figure.

This type of arrangement is such that it readily adapts itself to the formation of a display container for relatively large pots. It will be quite apparent for large size flower pots that if the lower end of the strip were turned inwardly and outwardly an undue and unnecessary amount of board material would be required therefor. Herein such support indicated by the numeral 327, is of full peripheral character. It may be of segmental character, if desired.

In Fig. 8 a further modified form of the invention is illustrated and this is substantially the same as that illustrated in Fig. 6 in that the container contents, representing a vessel or the like, is suspendingly supported by the inturned portions turned inwardly and downwardly at the top of the tubular formation and inwardly and upwardly at the bottom of the tubular formation. Numerals of the 400 series indicate like or similar parts.

Herein the vessel indicated by the letter C in Fig. 8 may represent a saucer, or the like. It may also represent a pie plate of metal or paper board stock. This form of the invention, it will be apparent, readily lends itself to the sanitary display of edible merchandise in that the pie within the pie plate C may be protected by a sheet of transparent covering, such as "Cellophane," or the like, and which sheet would be engaged in the groove formed between and by the two shoulders 420. Since this form of display and sanitary packaging per se is broadly old in the art, no further illustration or reference thereto is believed necessary. It will be apparent that in this form of the invention the bottom of the plate C is above the plane of the supporting surface so that if the contents of the pie should soak through the plate, the same would not mar or disfigure in any way such supporting surface.

Reference now will be had to Fig. 9. In this figure numerals of the 500 series indicate like or similar parts. The container or display device is substantially of the same character as illustrated in Figs. 6 and 8 in that it is formed from a single strip of single face corrugated board of the character shown in Fig. 10, the upper and lower ends of which are turned inwardly and towards each other. Herein the articles D are shown as including a relatively large number of nested paper plates arranged in two groups, approximately one-half of them being arranged in the normal position and this being the lower half of the plates, whereas the other half is arranged in inverted position and these constitute the upper half of the plates, but the flanges D' of said plates abut each other and the plates are held together and in unitary package formation by the inturned portions of the strip by the shoulders 520 thereof.

In packaging plates of this general character, the strip is arranged in tubular formation with the lower inturned portion positioned inwardly and secured in tubular formation. Then the plates are inserted and rest on the lowermost shoulder 520. The upper portion of the strip then is turned inwardly so that the upper shoulder 520 bears on the uppermost flange D' of the plates and thus the plates are secured in assembled and packaged relation.

It will be understood that the embodiments of the invention shown in Figs. 6 to 9, inclusive, constitute only a few of the main applications of the invention.

In Fig. 11 there is illustrated a modified form of the invention and numerals of the 600 series indicate like or similar parts. Herein 610 indicates the inside liner, 611 indicates the rela-

tively exterior corrugated layer, 616 indicates the hinge portion between the liner 610 and the liner 615. 614 indicates the inturned corrugated portion. The lower edge of the inturned portion is indicated by the numeral 600. Herein there is provided a pair of parallel slits 601 and 602 between the hinge conection 616 and the free edge 600.

The corrugated material indicated by the numeral 603 between these slits 601 and 602, may be mashed so they overlap one another as indicated at 604 or if desired, they may be removed from the liner portion 615. In either event, there is provided by the parallel edges 605 and 606 of the corrugated portion 614 and formed and defined by said slits 601 and 602, respectively, a groove adapted to receive an end closure, or the like, such as illustrated in Figs. 2 or 5, or an article or the like, such as illustrated in Figs. 6 to 9, inclusive.

Referring again to Fig. 2, the same is intended to illustrate a further modified form of the invention. As illustrated in Figs. 4 and 5, a partable container is separable at 126. However, herein an inner member 124 is employed. Whenever the article is such that it occupies at least at one transverse section the entire available area, the container may be parted or made in two pieces, the adjacent open ends abutting as indicated by the broken line E in Fig. 1. To secure the portions together, a seal F may be employed. This is applied externally of the container.

Reference now will be had to Fig. 12. Herein numerals of the seven hundred series indicate like or similar parts. As illustrated, there is secured to liner 710 the corrugated portion 711 and the end may be formed as indicated at 713 to 716, inclusive. The opposite end includes portion 724*a*, the same constituting an extended and uncovered portion of the liner. This portion 724*a* is termed the tube extension end. Use of board of this character eliminates the necessity for using the extra member 124, see Figs. 4 and 5.

Reference now will be had to Figs. 13 to 15, inclusive, and herein numerals of the eight hundred series designate like or similar parts. That portion of the container selected for exemplification herein is broadly similar to the lower portion of the container shown in Figs. 4 and 5.

The corrugated board is of the character illustrated in Fig. 12 in that the upper open end is defined by the upwardly directed liner portion 824*a*. The liner near its lower end forms hinge 816 connecting inturned portions 814 and 815 to the main body portion. The upper free end 820 of the inturned portion forms a stop for the bottom closure. A strip of tape 818 interiorly of the liner unites the adjacent ends 817 of the liner 810 in abutting relation.

Closure 821 herein includes a sheet of double face board, the corrugations at the portion 820*a* being severed and preferably transverse to the longitudinal direction thereof. The two half closures are thus hingedly connected together at 820*a* by the unsevered liner portion.

Herein tape 818 is extended at 818*a* and is secured to one-half of the closure forming a hinge parallel to hinge 820*a*. Another strip of tape 821*a* similarly secured to the other half closure and the liner 810 forms an opposite hinge.

It will be readily apparent the container can be flattened or collapsed with the closure folded upon itself so that the container can be shipped flat. To assemble and erect, this flattened container is positioned as shown in Figs. 14 and 15. Then the closure elevated portions are depressed until the peripheral edges seat upon shoulder 820. When this is accomplished the container will be sustained in erected position.

While the invention has been illustrated and described in great detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. An ornamental container arrangement including a sheet of corrugated paper board suitably joined end to end for tubular formation and content envelopment, said board having at least a liner layer interiorly of a corrugated layer, the corrugated layer being slit transverse to the axis of the tubular formation, the slit defined end portion of said layer and the liner portion secured thereto being turned inwardly at the slit portion, the liner layer at the slit constituting the hinge connection only, the inturned portion of the corrugated layer forming a retaining shoulder of appreciable width within the tubular formation and at the side wall thereof when adjacent liner portions are in contact, the opposite end of the board having its inner liner extended beyond the adjacent edge of the corrugated layer forming a tubular end extension therefor.

2. A two-part container including a pair of superposed container arrangements, one container arrangement including a sheet of corrugated paper board suitably joined end to end for tubular formation and content envelopment, said board having at least a liner layer interiorly of a corrugated layer, the corrugated layer being slit transverse to the axis of the tubular formation, the slit defined end portion of said layer and the liner portion secured thereto being turned inwardly at the slit portion, the liner layer at the slit constituting the hinge connection, the inturned portion of the corrugated layer forming an inwardly extending retaining shoulder of appreciable width within the tubular formation at the interior side wall thereof when the inturned liner portion engages the adjacent liner portion, the other container arrangement including a sheet of corrugated paper board suitably joined end to end for tubular formation and content envelopment, said board having at least a liner layer interiorly of a corrugated layer, the corrugated layer being slit transverse to the axis of the second tubular formation, the slit defined end portion of said layer and the liner portion secured thereto being turned inwardly at the slit portion, the liner layer at the slit constituting the hinge connection, the inturned corrugated portion forming a retaining shoulder of appreciable width within the second tubular formation, the opposite end of the board having its inner liner extended appreciably beyond the adjacent edge of the corrugated layer forming a smooth tube end therefor, the first mentioned container arrangement opposite end telescopically receiving the smooth tube end of the second mentioned container arrangement.

WILLIAM R. VAN WINKLE.