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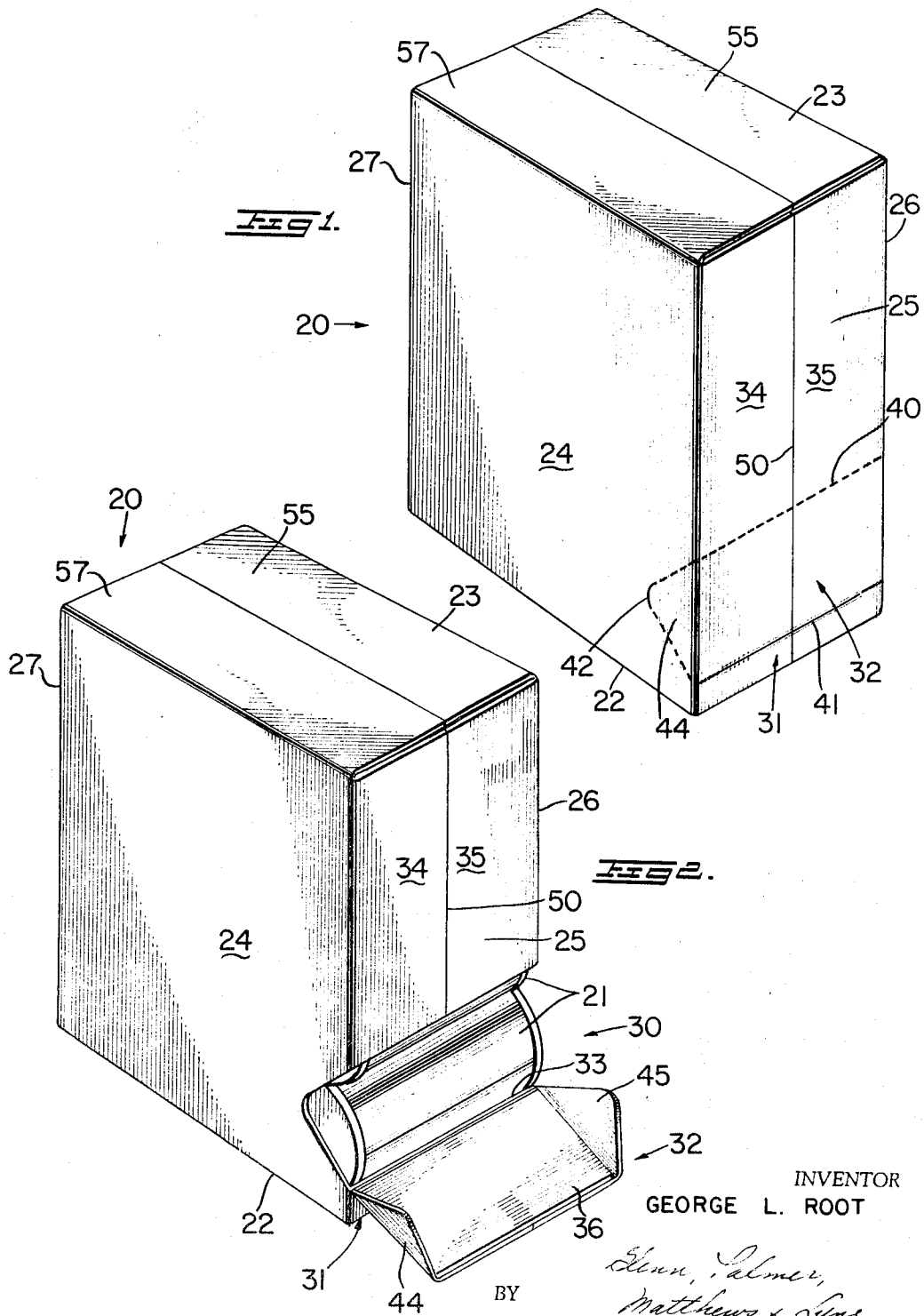
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SHIPPING AND DISPENSING CONTAINER MEANS AND BLANKS THEREFOR

Filed Feb. 23, 1966

3 Sheets-Sheet 1



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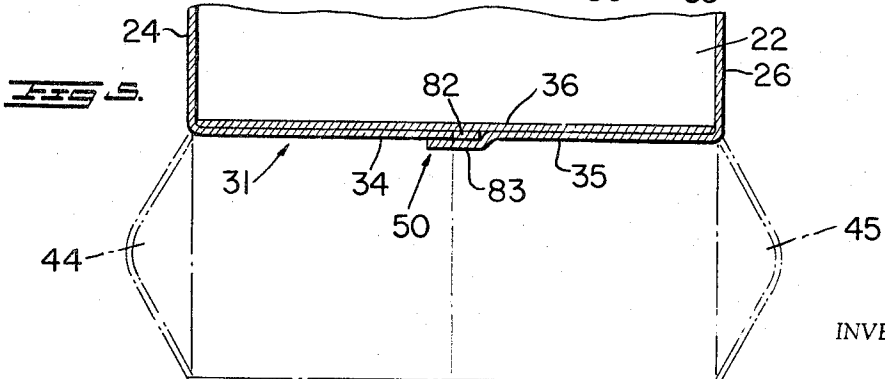
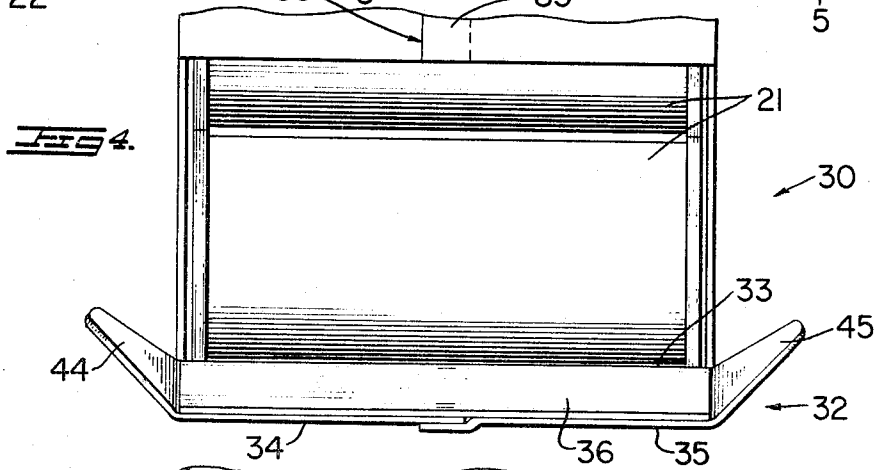
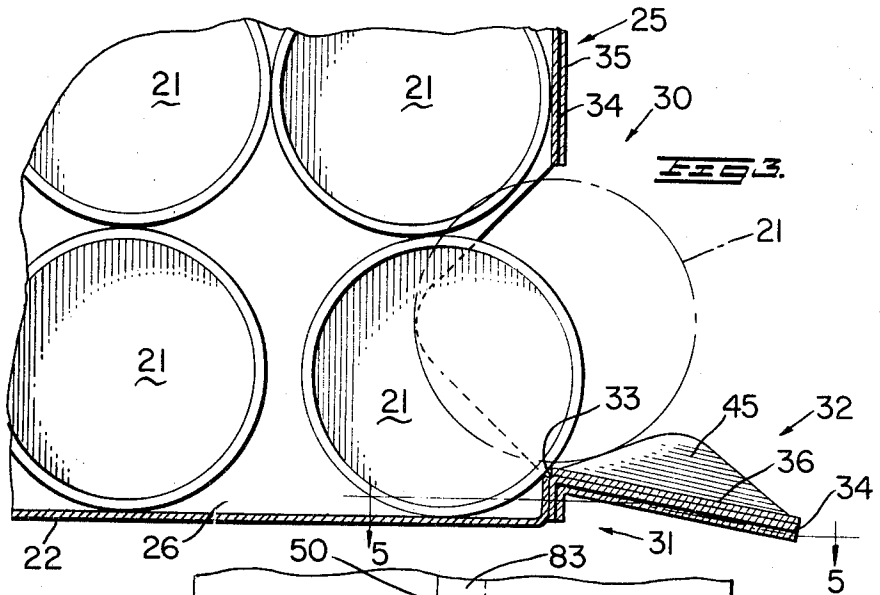
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SHIPPING AND DISPENSING CONTAINER MEANS AND BLANKS THEREFOR

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3 Sheets-Sheet 2



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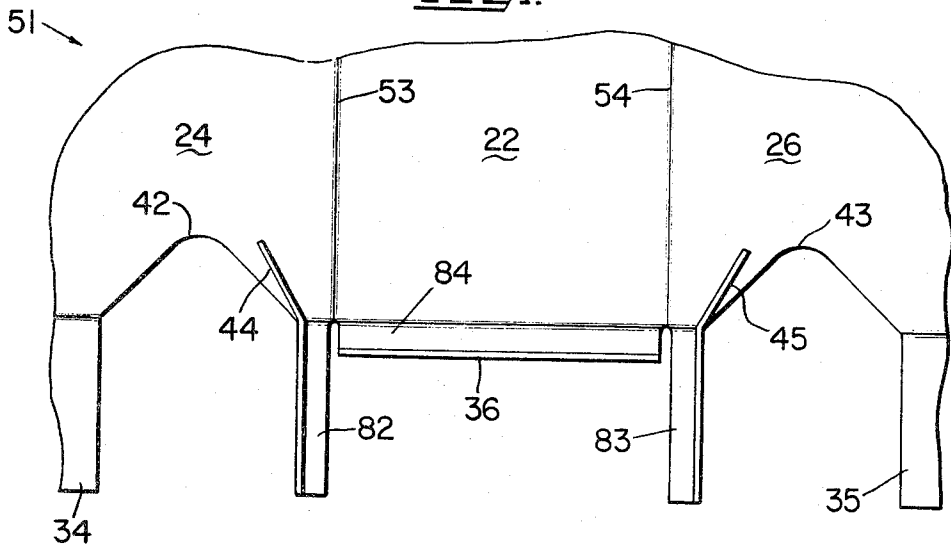
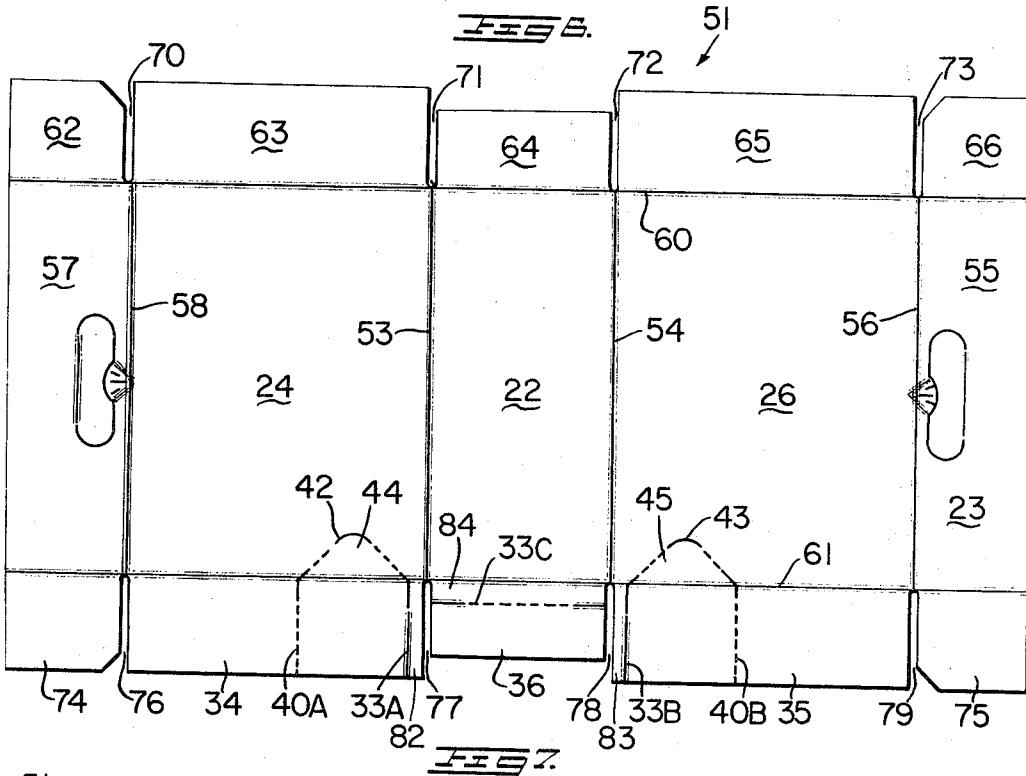
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SHIPPING AND DISPENSING CONTAINER MEANS AND BLANKS THEREFOR

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3 Sheets-Sheet 3



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3,356,279

**SHIPPING AND DISPENSING CONTAINER MEANS AND BLANKS THEREFOR**

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11 Claims. (Cl. 229—17)

**ABSTRACT OF THE DISCLOSURE**

This disclosure relates to an improved shipping and dispensing container for beverage cans, or the like, having improved multiple thickness retaining means for use in association with a dispensing opening provided in such dispensing container. The retaining means extends across the full width of the dispensing opening and is constructed and arranged to provide maximum strength for the container.

This invention pertains to container means and more particularly to an improved shipping and dispensing container means or the like and to improved blanks for making such shipping and dispensing container means.

The marketing of articles such as cylindrical beverage containers is greatly enhanced by the provision of container means which may be used to ship, store, and efficiently dispense the beverage containers individually. Previously proposed shipping and dispensing cartons for beverage cans are poorly constructed and the dispensing opening means provided therein tend to structurally weaken such cartons. In addition, means provided in each of such previous cartons to retain and dispense such cans provides poor performance.

Accordingly, it is a feature of this invention to provide improved container means of simple and economical construction which is easily opened for access to article means carried therewithin and which provides efficient dispensing of such article means.

Another feature of this invention is to provide improved container means having retaining means beneath dispensing opening means provided therein, such retaining means extending across the full width of such dispensing opening and thereby assuring minimum loss of structural strength for such container means.

Another feature of this invention is to provide improved container means having dispensing means therein in which such dispensing means is provided in a side wall thereof which has a triple thickness along its central portion thus providing even greater strength.

Another feature of this invention is to provide improved dispensing container means having hinged access door means in a side wall thereof having a multiple thickness in which the hinge means is provided by score means in such multiple thickness side wall thus providing increased hinge life.

Another feature of this invention is to provide improved shipping and dispensing container means for cylindrical beverage cans which can be made from a single sheet of foldable material with minimum waste, which can be formed on standard machinery thereby keeping production costs at a minimum, and the arrangement of cut and score means in such sheet assures the improved container means and dispensing means may be produced with minimum tooling changes to accommodate cans of various sizes.

Therefore, it is an object of this invention to provide improved container means having one or more of the novel features of this invention as set forth above or hereinafter shown or described.

Another object of this invention is to provide improved blanks for making such container means or the like.

Other objects, uses, and advantages of this invention are apparent from a reading of this description which proceeds with reference to the accompanying drawings forming a part thereof and wherein:

FIGURE 1 is a perspective view of an improved container means of this invention illustrating perforation means therein defining dispensing opening means in side wall means thereof.

FIGURE 2 is a perspective view of the improved container means illustrated in FIGURE 1 showing the area of each side wall means outlined by such perforation means torn outwardly to define access door means.

FIGURE 3 is a sectional view with parts broken away of the lower end portion of such container means as shown in FIGURE 2 particularly illustrating the position of cylindrical cans carried therewithin and in dotted line the position of a can half way through the access opening.

FIGURE 4 is a front view looking toward the access opening as shown in FIGURE 3 particularly illustrating the position of retaining means along the lower end portion of the container means and the position of the cylindrical cans with respect to the access door means.

FIGURE 5 is a sectional view on the line 5—5 of FIGURE 3 particularly illustrating the multiple thickness of the retaining means.

FIGURE 6 is a plan view of an improved container blank of this invention, adapted to be utilized to form the container of FIGURE 1.

FIGURE 7 is an enlarged plan view with parts broken away particularly illustrating the construction defining the dispensing opening means and retaining means for the container means of this invention.

While the various features of this invention are herein-after illustrated and described as being particularly adaptable for providing shipping, storage, and dispensing container means for identical generally cylindrical article means such as, identical elongated beverage cans, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof to provide containers for other articles as desired.

Therefore, this invention is not to be limited to only the embodiments illustrated in the drawings, because the drawings are merely utilized to illustrate one of the wide variety of uses of this invention.

In the exemplary embodiment of the invention illustrated in FIGURES 1-7, an improved contained means or container 20 of this invention is illustrated, as well as the improved container blank, FIGURES 6 and 7, for making such container. As particularly illustrated in FIGURES 2 and 3, container 20 in this example of the invention is particularly adaptable for containing and dispensing a plurality of generally identical elongated article means shown in this example as a plurality of beverage cans such as beer cans each designated by the numeral 21.

Container 20 has bottom wall means or a bottom wall 22 and top wall means or top wall 23 and a plurality of side wall means or side walls 24, 25, 26, and 27 connected to bottom wall 22 and top wall 23 to define container 20. Access opening means is provided in one of the wall means and in this example of the invention is provided in side wall 25. The opening means is illustrated generally at 30, see FIGURE 2, and extends across the lower end portion of side wall 25 leaving a terminal strip designated generally by the numeral 31 coextensive in width with side wall 25 and fastened to the adjoining walls 22, 24, and 26. Terminal strip 31 provides retaining means for cylindrical cans 21 carried within container 20. As will be apparent from the drawings the retaining strip 31 is of a multiple thickness and constructed and arranged to minimize or avoid damage thereto such that

throughout the use of container 20 in dispensing all of cans 21 carried therewithin, sufficient retaining and holding strength is provided.

Access opening 30 is provided by tearing along perforation means provided in walls 24, 25, and 26 and defining a hinged access door designated generally by the numeral 32. Access door 32 is hinged in a simple and economical manner about a score line designated generally by the numeral 33 and provided in wall 25 so as to define, in this example, the lower edge of opening 30 therein. FIGURE 2 illustrates door 32 in its open position.

Container 20 is constructed so that its walls 25 and 27 are of equal width and are formed to correspond to, being slightly wider than, the elongated dimension of cylindrical beverage cans 21 carried therewithin. As best seen in FIGURES 3 and 4 of the drawings, opening 30 provided in container 20 has a vertical height which is slightly larger than the corresponding transverse dimension normal to the axis of cylindrical cans 21. In this example, such vertical height is slightly larger than the diameter of cans 21.

Terminal strip 31 has a height which is a fractional part of the transverse dimension of cans 21 and in this example is preferably less than half the diameter of each can 21. Strip 31 is of sufficient height to assure cans 21 do not roll out of the container once access door 32 has been opened.

As shown particularly in FIGURE 6 illustrating the blank used to make container 20, side wall 25 is formed by folding extension flap means extending from other wall means of container 20 into a common plane. In this example of the invention a pair of extension flaps 34 and 35 extending respectively from side walls 24 and 26 define the outer surface of wall 25. Extension flap means shown as an extension flap 36 extend from one end of bottom wall 22 and defines the inside surface of side wall 25 at its lower end portion.

Opening means 30 in side wall 25 is defined by a series of rectilinear perforations 40 therein parallel to the bottom of container 20 and forming in this example the top edge of opening 30 upon tearing therealong. Score means illustrated as a score line 41 is provided in side wall 25 parallel to perforations 40 and defines the opposite lower edge of opening 30. Perforations 40 and score line 41 cooperate with symmetrically arranged arcuate perforation means provided in each side wall 24 and 26 such that upon tearing along such perforations and folding outwardly along score line 41 access opening 30 is provided.

The arcuate perforation means provided in this example of the invention comprises a plurality of perforations in each wall 24 and 26 arranged so as to be generally V-shaped. V-shaped perforations 42 and 43 extend into walls 24 and 26 respectively, a distance corresponding to a fractional part of the diameter of cans 21. The terminal open ends of V-shaped perforations 42 and 43 coincide with the respective end of perforations 40 and score line 41 associated therewith.

Thus, it is seen that dispensing opening means 30 in container 20 is provided by pressing the portion of side wall 24 outlined by generally V-shaped perforation 42 inwardly and similarly pressing the portion of side wall 26 outlined by generally V-shaped perforation 43 thereby severing along such walls as defined by its associated perforations to define a pair of generally V-shaped flaps. The V-shaped flaps in side walls 24 and 26 are designated by the numerals 44 and 45 respectively. Wall 25 is then torn along its rectilinear perforations 40 and folded about its score line 41 to define hinged access door 32 for the container 20, with V-shaped flaps 44 and 45 extending inwardly from opposite side edges of access door 32. It will be apparent from FIGURE 2 of the drawings that each can 21 is easily grasped at its outer ends upon exposing such outer ends by swinging access door 32 outwardly and then lifting each can 21 upwardly, over retaining strip 31, and through access opening 30.

As shown in FIGURE 5 of the drawings the retaining means or retaining strip 31 has a multiple thickness thereby providing greater structural strength. Thus, upon folding the blank used to form container 20 it will be seen that extension flaps 34, 35 and 36 are overlapped and fastened together. Strip 31 has an inside surface which is formed by the base portion of extension flap 36 and an outside portion which is defined by overlapping extension flaps 34 and 35. Flaps 34 and 35 overlap at a point designated by the numeral 50 at the center of retaining strip 31 thereby providing a triple thickness at this point. With extended use, as each can 21 drops into dispensing position and is then ready to be lifted out of container 20 and beyond retaining strip 31, the force exerted against retaining strip 31 is not sufficient to deform or tear such strip away as would be the tendency with prior containers.

Container 20 can be formed in any suitable manner and made from any suitable foldable material. It is preferably formed from the container blank 51, illustrated in FIGURE 6. Blank 51 is made of cardboard or the like, having a side such as an exposed surface thereof laminated with metallic foil, such as aluminum-containing metallic foil, or the like, suitably colored, embossed, imprinted, or remaining plain, as desired.

The shipping, storing and dispensing container means of this invention formed from blank 51 is particularly adaptable for use as a dispensing container for cylindrical cans of cold beverages, such as beer, soda pop, or the like. The metallic foil laminated to one side, preferably the outside, of such container means assures that the beverage cans carried therewithin are kept cold for a maximum period of time.

Blank 51 is suitably cut and scored to define improved container means 20 of this invention having six foldably connected exterior walls 22, 23, 24, 25, 26 and 27.

Bottom wall 22 is centrally located in blank 51 and side walls 24 and 26 extend to either side thereof from a pair of score lines 53 and 54 respectively at opposite side edges of bottom wall 22. An extension flap 55 extends beyond a fold line 56 at the terminal outer edge of side wall 26. Similarly extension flap 57 extends beyond fold line 58 at the terminal outer edge of side wall 24. It will be seen from FIGURE 6 of the drawings that an open ended tubular structure is formed upon suitably fastening flap 55 to flap 57 along the central portion thereof to define side wall means or top wall 23. Top wall 23 has a transverse dimension equal to bottom wall 22.

A pair of parallel spaced apart score lines 60 and 61 is provided extending completely across blank 51. Each score line 60 and 61 engages an associated opposite terminal end of score lines 58, 53, 54 and 56. Cut means is provided in blank 51 in association with score lines 60 and 61 to define walls 25 and 27.

Wall 27 is defined by a series of flaps 62, 63, 64, 65 and 66 extending from one edge of blank 51 respectively beyond extension flap 57, side wall 24, bottom wall 22, side wall 26, and extension flap 55. The side edges of flaps 63, 64, 65 and 66 are respectively defined along one side by a series of cut means or cuts 70, 71, 72 and 73 extending beyond one terminal end of score lines 58, 53, 54 and 56 respectively and the top outer edge of blank 51 as viewed in the drawing of such blank.

In a similar manner, side wall 25 is formed by extension flaps 74, 34, 36, 35 and 74 extending from an opposite edge of blank 51 respectively beyond extension flap 57, side wall 24, bottom wall 22, side wall 26 and extension flap 55. The side edges of flaps 34, 36, 35 and 75 are respectively defined by a series of cut means or cuts 76, 77, 78 and 79. Cuts 76-79 extend respectively beyond the opposite terminal ends of score lines 58, 53, 54 and 56.

Upon assembling blank 51 to form container 20, flaps 62, 63, 64, 65 and 66 are suitably fastened together to define side wall 27 while flaps 74, 34, 36, 35 and 75 are suitably fastened together to define side wall 25. The

associated flaps used to form side walls 25 and 27 may be fastened together in any suitable manner as by using glue or the like.

Side wall 24 has a series of generally V-shaped perforations 42 therein defining generally V-shaped flap 44. In a similar manner side wall 26 has a series of generally V-shaped perforations therein designated by the numeral 43 defining flap 45.

Perforations 40 in side wall 25 are formed by a series of rectilinear perforations 40A extending from one terminal end of V-shaped perforation 42 in side wall 24. Perforations 40B extend from a corresponding terminal end of V-shaped perforations 43 in side wall 26. The score means provided in assembled side wall 25 is defined by a score line 33A extending from the opposite open end of V-shaped perforation 42. A similar score line 33B extends from the corresponding opposite open end of V-shaped perforation 43. Similarly, extension flap 36 extending from score line 61 at one edge of bottom wall 22 has a score line 33C extending across the entire width thereof. Thus, upon assembling blank 51 to form container 20 it will be apparent that score lines 33A, 33B and 33C will overlap and coincide, while perforations 40A and 40B will similarly correspond in position so that upon depressing V-shaped tabs 44 and 45 and tearing along the V-shaped perforations 42 and 43 at the ends and perforations 40 along the middle portion hinged access door 32 is provided hinged about score line 33.

A portion of each flap 34 and 35 designated respectively by the numerals 82 and 83, is outlined respectively by score line 61 and score line 33A in flap 34 and by score line 61 and score line 33B in flap 35. Thus, upon assembling blank 51 to form container 20 flap portions 82 and 83 coincide with a flap portion designated by the numeral 84 and extending between score line 33C and score line 61 at the base of extension flap 36. Upon fastening flaps 74, 34, 36, 35, and 75 together as previously mentioned a double thickness retaining means 31 is provided along the full length of such retaining means with the exception of the center portion where flaps 82 and 83 overlap and provide a triple thickness.

It will be seen, therefore, that upon tearing along the above described perforation means and opening access door 32, as shown in FIGURE 2, a multiple thickness retaining means 31 is provided assuring that cans 21 are retained within the container 20, except as desired by the user thereof. Withdrawal of cans 21 is simply and easily made through dispensing opening 30 by simply grasping each can at its ends and lifting over the retaining means 31.

Container 20 of this invention has been illustrated with its access door 32 hinged downwardly for easy unobstructed removal of cans 21. It will be appreciated that container 20 could have had its access door 32 hinged upwardly so that the weight of such door would keep it closed except at the time when a can 21 is being removed. This change could be simply accomplished by reversing the positions of score line 41 and perforations 40 in side wall 25.

It will be appreciated also that it may be desirable in some instances to tear away access door 32 leaving the container 20 with its access opening exposed. If this is desired, it can be accomplished simply by tearing along score means 33 which in this example of the invention is preferably formed by spaced apart rectilinear cuts arranged in such a manner as to provide the same effect as a score line, however, also enabling tearing therealong if desired.

Terms such as "side wall," "bottom wall," "top wall," "top," "bottom," etc., have been used in this disclosure for ease in description and define the walls as shown in the drawings. Such description is not to be considered as limiting in any sense.

Thus, it is seen that improved container means of simple and economical construction has been provided which is adapted for use as a shipping, storage, and dis-

pensing container and which has dispensing means therein affording maximum strength and assuring that throughout the dispensing of all article means carried therewithin, adequate retention of such article means is provided while precluding damage to such retention means.

Further, this invention provides improved blanks for forming such containers or the like.

While the form of the invention now preferred has been disclosed as required by statute, other forms may be used, all coming within the scope of the claimed subject matter which follows.

What is claimed is:

1. Improved container means having integral dispensing means for dispensing a plurality of generally identical article means carried therewithin comprising, bottom and top wall means, a plurality of side wall means connected to said bottom and top wall means to define said container means for said article means, bottom wall extension flap means extending from said bottom wall means, a pair of side wall extension flap means extending from cooperating side wall means arranged opposite each other, said side wall extension flap means being overlapped and fastened together adjacent their terminal outer edges and to said bottom wall extension flap means to define one of said side wall means; and opening means in said one side wall means extending across the entire lower end portion thereof leaving a terminal strip coextensive in width with said one wall means, said terminal strip being formed by portions of said extension flap means, whereby said terminal strip has a multiple thickness and is made from extension flap means extending from a plurality of wall means to provide increased strength retaining means for said article means.

2. Improved container means as set forth in claim 1 in which the height of said opening means is slightly larger than a corresponding transverse dimension of said article means enabling easy removal therethrough and said terminal strip has a height which is a fractional part of said transverse dimension for easy grasping and removal of each of said article means.

3. Improved container means as set forth in claim 1 in which said opening means is defined by perforation means arranged in said one wall means to define an access door upon tearing thereof, said door being hinged about score means provided in said one wall means and defining one side edge of said opening means.

4. Improved container means having integral dispensing means for dispensing a plurality of generally identical article means carried therewithin comprising, bottom and top wall means, a plurality of side wall means connected to said bottom and top wall means to define said container means for said article means, bottom wall extension flap means extending from said bottom wall means, a pair of side wall extension flap means extending from cooperating side wall means arranged opposite each other, said side wall extension flap means being overlapped and fastened together adjacent their terminal outer edges and to said bottom wall extension flap means to define one of said side wall means with said bottom wall extension flap means defining the lower end portion of inside surface means of said one side wall means, a series of rectilinear perforation means in said one wall means arranged parallel to the bottom of said container means, score means in said one wall means arranged in parallel spaced apart relation to said rectilinear perforation means, said rectilinear perforation means and said score means defining opposite edge means of opening means in said one wall means and said opening means extending across the entire lower end portion of said one wall means leaving a terminal strip coextensive in width with said one wall means, said terminal strip being formed by portions of said extension flap means and providing retaining means for said article means, symmetrically arranged arcuate perforation means in each of said side wall means adjoining said one side wall means extending into each

of said adjoining side wall means a fractional part of the transverse dimension of said article means with the terminal ends of each of said arcuate perforation means coinciding at their respective ends with said rectilinear perforation means and said score means, and said score means defining the lower edge of said opening means while being provided in said bottom wall and side wall extension flap means thereby defining a multiple thickness hinge for said access door, whereby to open said container means the portions of said wall means within said perforation means are pressed inwardly severing along said arcuate perforation means to define a pair of arcuate flaps and said opening means is formed by tearing along said rectilinear perforation means and folding about said score means to define a hinged access door for said container means having said arcuate flaps extending from opposite side edges thereof, such that each of said article means is easily grasped at its outer ends upon exposing said outer ends by swinging said access door outwardly.

5. Improved container means as set forth in claim 4 for dispensing a plurality of elongated generally cylindrical and identical articles each having a length along its axis corresponding to the width of said one side wall means and a dimension normal to said axis corresponding to and being slightly smaller than the height of said opening means, said terminal strip being a fraction of said transverse dimension such that said terminal strip provides retaining means retaining said articles within said container means while assuring accessibility for removal thereof.

6. Improved container means as set forth in claim 5 in which said adjoining side wall extension flap means are generally equal in length and overlap at the center portion of said one side wall means while overlapping the base portion of said bottom wall extension flap means thereby providing a terminal strip having a triple thickness at its center portion and a double thickness on either side of said center portion to provide increased retaining strength.

7. Improved container means as set forth in claim 6 made from a single blank of foldable material having metal foil laminated to a side thereof and being suitably cut and scored to provide said wall means upon assembly thereof.

8. A blank being cut and scored and adapted to be assembled to form a resulting dispensing container means for a plurality of identical generally cylindrical article means comprising, bottom and top wall means, a plurality of side wall means foldably connected to said bottom and top wall means to define said resulting container means for said article means upon assembling said blank, bottom wall extension flap means extending from said bottom wall means, a pair of side wall extension flap means extending from cooperating side wall means arranged opposite each other, said side wall extension flap means being overlapped and fastened together adjacent their terminal outer edges and to said bottom wall extension flap means to define one of said side wall means in said resulting container, and opening means in said one side wall means extending across the entire lower end portion thereof leaving a terminal strip coextensive in width with said one wall means, said terminal strip being formed by portions of said extension flap means, whereby said terminal strip has a multiple thickness and is made from extension flap means extending from a plurality of wall means to provide increased strength retaining means for said article means.

9. A blank as set forth in claim 8 in which said opening means is defined by perforation means arranged in said one wall means to define an access door for said container means upon tearing thereof, said door being hinged about score means provided in said one wall means and defining one side edge of said opening means.

10. A blank being cut and scored and adapted to be assembled to form a resulting dispensing container means for a plurality of identical generally cylindrical article means comprising; bottom and top wall means; a plurality of side wall means foldably connected to said bottom and top wall means to define said resulting container means for said article means upon assembling said blank; wherein one of said side wall means in said resulting container means comprises, bottom wall extension flap means extending beyond second score means defining one side edge of said bottom wall means with said bottom wall extension flap means defining the lower end portion of the inside surface of said one side wall means, side wall extension flap means each extending beyond parallel spaced apart third score means in said blank and defining side edges of oppositely arranged side wall means of said resulting container means, said side wall extension flap means being overlapping and fastened together in said resulting container means along their terminal outer edges and to said bottom wall extension flap means to provide a multiple thickness to said one side wall means along said lower end portion, and opening means in said one side wall means extending across the entire lower end portion thereof leaving a terminal strip coextensive in width with said one wall means, said terminal strip being formed by portions of said extension flap means and said opening means in said one assembled side wall means being defined by a series of rectilinear perforation means therein parallel to the bottom of said container means defining one edge thereof and first score means in said multiple thickness lower end portion parallel to said perforation means defining an opposite edge of said opening means; and symmetrically arranged generally V-shaped perforation means in each of said side wall means adjoining said one side wall means extending into each of said adjoining side wall means a fractional part of the transverse dimension of said article means, with the terminal ends of each of said V-shaped perforation means coinciding at their respective open ends with said rectilinear perforation means and said first score means; whereby to open said resulting container means the portions of said wall means within said V-shaped perforation means are pressed inwardly and severed along said V-shaped perforation means to define a pair of generally V-shaped flaps and said opening means is formed by tearing along said rectilinear perforation means and folding about said first score means for access into said container means, said multiple thickness lower end portion of said one side wall means providing increased hinge strength as well as providing said retaining means therebelow also having greater strength, and each of said article means is easily grasped at its outer ends upon exposure thereof by swinging said access door outwardly and removed from said container means by lifting over said terminal strip.

11. A blank as set forth in claim 10 in which said resulting container means assembled from said blank is adapted for dispensing a plurality of elongated generally cylindrical and identical articles in which the width of said one side wall means corresponds to the length of each of said cylindrical articles along its axis and the height of said opening means is slightly larger than the transverse dimension of each cylindrical article normal to its axis.

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