CONTAINER WITH DISPENSING HOPPER MEANS AND BLANKS FOR MAKING THE SAME

Melvin T. Farquhar, Chesterfield County, Maurice F. Nagle, Henrico County, and Edward T. Bryant, Bon Air, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware.

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This invention relates to an improved container having dispensing hopper means as well as two improved blanks for forming such a container or the like.

It is well known that it is desirable to provide an attractive container which is adapted to be utilized as a display means for the articles packaged therein and which can be utilized to readily dispense such articles to the ultimate consumers.

For example, most restaurants and the like normally have disc-shaped after dinner mints located at the cashier's counter and some means must be provided for displaying such mints so that the customers can purchase the same.

Accordingly, one of the features of this invention is to provide a container which is readily adapted to package for transportation and storage purposes such after dinner mints and the like wherein such container can be subsequently utilized for displaying and dispensing such mints to the ultimate consumer without requiring special displaying means.

For example, one embodiment of this invention comprises a container having wall means provided with an opening that is opened and closed by a hopper portion, the hopper portion when in the opened position permitting the contents of the container to be readily viewed and permitting the contents to be dispensed to the ultimate consumer.

Accordingly, it is an object of this invention to provide an improved container 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 an improved blank for forming such a container 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 one embodiment of the improved container of this invention.

FIGURE 2 is a view similar to FIGURE 1 illustrating the container of FIGURE 1 in its opened position.

FIGURE 3 is an axial, cross-sectional view taken on line 3—3 of FIGURE 2.

FIGURE 4 is an enlarged, fragmentary view taken on line 4—4 of FIGURE 3.

FIGURE 5 is a plan view of the improved blank of this invention for forming the container of FIGURE 1.

FIGURE 6 is a fragmentary, perspective view illustrating one method of forming the container of FIGURE 1 from the blank of FIGURE 5.

FIGURE 7 is a view similar to FIGURE 1 illustrating another container of this invention.

FIGURE 8 is a view similar to FIGURE 7 illustrating the container of FIGURE 7 in its opened position.

FIGURE 9 is an axial, cross-sectional view taken on line 9—9 of FIGURE 8.

FIGURE 10 is a plan view of an improved blank of this invention for forming the container of FIGURE 7.

FIGURE 11 is a fragmentary, perspective view illustrating one method for forming the container of FIGURE 7 from the container blank of FIGURE 10.

While the various features of this invention are hereinafter described as being particularly adaptable for forming a container for displaying and dispensing after dinner mints or the like, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof to provide structures 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.

Referring now to FIGURE 1, an improved container of this invention is generally indicated by the reference numeral 20 and comprises a plurality of side wall means 21, 22, 23 and 24, a bottom wall means 25 and a top wall means 26 formed in a manner hereinafter described to provide a substantially rectangular container 20.

The front side wall means 21 of the container 20 is provided with an opening 27 extending from the bottom wall means 25 to an edge 28 of the wall means 21 spaced from the top edge thereof, the opening 27 extending to the adjacent side wall means 22 and 24.

A hopper means or portion 29 is carried by the container 20 and is adapted to completely close the opening 27 thereof in the manner illustrated in FIGURE 1 and be moved to an opened position as illustrated in FIGURE 2 to provide dispensing means for the contents of the container 20 disposed in the compartment 30 thereof, the contents of the container tending to spill out of the compartment 30 when the hopper means 29 is opened in the position illustrated in FIGURE 2. However, the opened hopper means 29 prevents the contents of the container 20 from spilling out of the opening 27 thereof so that the contents of the container can be readily viewed through the opened hopper means 29 and can be dispensed therefrom by the ultimate consumer merely reaching into the filled hopper means 29 and removing the desired article or articles.

Because the hopper means 29 is disposed adjacent the bottom of the container 20, the opened hopper means 29 always remains full as taken articles are replaced by other articles falling through the opening 27 whereby the disposing carton 29 always gives the appearance of being freshly opened to enhance the sales appeal of the contents of the container 20.

When the container 20 is initially formed and filled with the desired articles, the hopper means 29 is disposed in the closed position as illustrated in FIGURE 1 and can be retained in the closed position by initially disposing a band or sleeve around the container 20.

For example, a transparent and tubular overlap 31 can be utilized as illustrated in FIGURE 1 to hold the hopper means 29 in its closed position until it is desired to open the hopper means 29 whereby the overlap 31 can be removed and discarded.

Therefore, it can be seen that this invention provides an improved container 20 which is adapted to package the desired articles for storage and shipment purposes and, thereafter, be utilized as an attractive displaying and dispensing means for the contents thereof.

While the container 20 of this invention can be formed of any suitable material and in any suitable manner, the embodiment thereof illustrated in the drawings is formed from a container blank of this invention that is generally indicated by the reference numeral 32 in FIGURE 5.

The container blank 32 is formed from cardboard or the like having the exterior surface thereof coated in any suitable manner, such as by having a sheet of aluminum-containing foil or the like laminated thereto.

The container blank 32 is suitably cut and scored to define a series of foldably connected walls 33, 34, 35 and 36 respectively foldably connected together at score or
The container 20 includes fold lines 37, 38 and 39, the walls 33-36 respectively being adapted to form the side wall means 23, 21, 24 and 22 of the container 20.

An interconnecting flap 40 is foldably connected to the free side edge of the wall 33 at a score or fold line 41, the interconnecting flap 40 being adapted to be glued to the inside surface at the free edge of the wall 36 to form a side wall 23 in the rectangular and tubular form illustrated in FIGURE 1.

A plurality of top closure flaps 42, 43 and 44 are respectively die cut from each other and are respectively foldably connected to the top edges of the walls 33, 34 and 35 at the score or fold line 45, the top closure flaps 42 and 44 being substantially identical and being adapted to be disposed under the top closure flap 43 that is adapted to span the top open end of the container 20 and has an insertable tongue portion 46 foldably connected thereto at a score or fold line 47 to complete the top wall means 26 of the container 20 in the conventional manner.

A pair of bottom flaps 48 and 49 are respectively foldably connected to the bottom edges of the walls 33 and 35 at the score or fold lines 50 and 51, the bottom flaps 48 and 49 each being adapted to respectively span the bottom of the container 20.

The bottom flap 48 has one or more rectangular flaps 52 die cut on three sides thereof to form interlocking means in a manner hereinafter described.

The bottom flap 49 has a number of interlocking tab means 53 carved therefrom to register with and correspond to the number of flaps 52 formed in the bottom flap 48 for the purpose hereinafter described, each interlocking tab 53 having a hook-shaped free end 54.

The means for forming the hopper means 29 of the carton 20 is integrally interconnected to the blank 32 and comprises a bottom flap 55 foldably connected to the bottom edge of the wall 56 at a score or fold line 56 and has its outer free edge foldably connected to a front panel 57 of the hopper means 29 at a score or fold line 58.

The bottom wall flap 55 is relieved at 59 to accommodate the interlocking means 52 and 53 in a manner hereinafter described.

A pair of side panel means 60 and 61 are respectively foldably connected to side edges of the front panel 57 of the hopper means 29 at score or fold lines 62 and 63, each side panel 60 or 61 having an arcuate upper surface 64 terminating in an outwardly directed ear 65 for a purpose hereinafter described. However, the edges 64 need not be arcuate as the same may be chords of the arcs illustrated or anything between the chords and arcs as desired.

Therefore, it can be seen that the container blank 32 of this invention can be formed in a relatively simple manner by utilizing conventional die cutting and die scoring means.

While the blank 32 of this invention can be folded in any desired sequence to form the container 20 of this invention, one such method is illustrated in FIGURE 6 wherein the side walls 33-36 have been formed in tubular form by the interconnecting flap 40 in the manner previously described whereby the bottom wall means 25 of the container 20 can be formed by first folding inwardly the bottom flap 48 across the bottom of the container 20 and, thereafter, folding the bottom flap 55 of the hopper means 29 against the bottom flap 48 as illustrated in FIGURE 6. The remaining bottom flap 49 can then be folded against the bottom flap 55 to cause the interlocking tabs 53 thereof to register with the flaps 52 of the bottom flap 48 as provided by the cut-away portion 59 of the bottom flap 48 and 53 in the side panel 60.

The bottom flap 49 is adapted to lock the bottom flaps 48, 49 and 55 together by having the interlocking tabs 53 thereof project upwardly through openings 66 formed in the bottom flap 48 by the tab means 52 thereof, the hook-shaped ends 54 of the interlocking flaps 53 mechanically locking in the resulting openings 66 as illustrated in FIGURE 4.

Therefore, it can be seen that the bottom wall means 25 of the container 20 of this invention can also be formed by mechanical locking means.

However, the bottom wall means 25 of this invention can be formed in any other desired manner, such as by utilizing a suitable adhesive or the like whereby the mechanical locking means previously described can be eliminated.

After the bottom wall means 25 has been formed in the above manner, the side panels 60 and 61 of the hopper means 29 can be folded toward each other at angles of 60° or less to the panel 57 and, thereafter, moved through the opening 27 in the front side wall 21 to permit the hopper means 29 to be disposed in the closed position illustrated in FIGURE 1 whereby the front panel 57 completely fills the opening 27 and is disposed flush with the front side wall means 21 while the side panels 60 and 61 will be held in the proper position against the walls 33 and 35 by the articles subsequently disposed in the container 20.

Thereafter, the desired articles can be packaged in the container 20 through the opened upper end thereof and the top wall means 26 can be disposed in the conventional manner to completely close the container 20.

Subsequently, a suitable sleeve, such as the overlap 31, is disposed around the container 20 to hold the hopper means 29 in its closed position whereby the completed container 20 can be shipped and stored.

When the user of the container 20 desires to have the hopper means 29 disposed in its opened dispensing position, the overlap 31 is removed and the front panel 57 of the hopper means 29 is pulled outwardly whereby the same moves about its hinged connection at the bottom wall means 25 and causes the side panels 60 and 61 to move outwardly therewith until the ears 65 of the side panels 60 and 61 abut against the edge 28 of the front side wall means 21 in the manner illustrated in FIGURE 3 to prevent further opening of the hopper means 29.

By the opening of the hopper means 29, the articles disposed in the compartment 38 of the container 20 will fall the opened hopper means 29 so that the same can be readily viewed and dispensed through the open hopper means 29.

Therefore, it can be seen that this invention provides an improved container having a dispensing hopper means 29 as well as provides an improved blank for making such a container or the like.

Another container of this invention is generally indicated by the reference numeral 67 in FIGURES 7 and 8 and parts thereof similar to the container 20 previously described are indicated by like reference numerals followed by the reference letter "a."

For example, the container 67 is substantially rectangular and is defined by side wall means 21a, 22a, 23a and 24a, bottom wall means 25a and top wall means 26a, the front side wall means 21a having an opening 27a provided therein adjacent the bottom wall means 25a and being opened and closed by a hopper means 29a in the manner previously described.

While the container 67 of this invention is substantially similar to the container 20 and operates in the same manner as previously described, the container 67 of this invention is formed from another improved container blank of this invention that is generally indicated by the reference numeral 68 in FIGURE 10.

As illustrated in FIGURE 10, the container blank 68 is suitably cut and scored to define a series of foldably connected walls 69, 70, 71 and 72 respectively foldably connected together at score or fold lines 73, 74, 75, 76, 77, 78 and 79, the walls 69, 70, 71 and 72 respectively forming the side wall means 23a, 22a, 21a and 24a of the container 67.
An interconnecting flap 76 is foldably connected to the free edge of the wall 69 at a score or fold line 77, the interconnecting flap 76 functioning in the same manner as the interconnecting flap 49 previously described.

A plurality of top closure flaps 78, 79 and 80 are respectively foldably connected to the top edges of the walls 71 and 72 at a score or fold line 91, the top flaps 78, 79 and 80 cooperating in the same manner as the top flaps 42, 43 and 44 previously described to form the top wall means 26a of the container 67.

A pair of bottom flaps 82 and 83 are respectively foldably connected to the bottom edges of the walls 69 and 72 at the score or fold lines 84 and 85, the bottom flap 83 having one or more rectangular flaps 86 die cut on three sides for the same purpose as the flaps 52 previously described, while the bottom flap 82 has a cut-away portion 87 for a purpose hereinafter described.

The hopper means 29a of the container 67 is formed integrally with the blank 68 and comprises a bottom flap 83 foldably connected to the bottom edge of the wall 70 at a score or fold line 89 and having its side edge foldably connected to a front panel 90 of the hopper means 29a at a score or fold line 91, the bottom flap 88 having a plurality of interlocking tabs 92 curved therefrom to cooperate with the flaps 86 in the same manner as the interlocking tabs 53 previously described.

A pair of like side panels 93 and 94 are respectively foldably connected to side edges of the front panel 90 of the hopper means 29a at score or fold lines 95 and 96, the like side panels 93 and 94 having arcuate upper edges 97 terminating in outwardly directed ears 98. However, the edges 97 need not be arcuate as the same may be chords of the arcs illustrated or anything between the chords and arcs as desired.

Therefore, it can be seen that the container blank 68 of this invention can also be simply die cut and die scored in the same manner as the container blank 23 previously described.

While the container blank 68 can be folded in any desired sequence to form the container 67 of this invention, one method is illustrated in FIGURE 11, wherein the side walls 69—72 have been formed in the rectangular and tubular form by being interconnected together by the interconnecting flap 76 in the manner previously described.

Thereafter, the bottom wall means 25a of the container 67 is formed by first folding inwardly the bottom flap 83 across the bottom of the container 67 and, thereafter, folding inwardly the bottom flap 82 against the bottom flap 83, whereby the cut-away portion 87 of the bottom flap 82 registers with the tab means 86 of the bottom flap 83.

Subsequently, the bottom flap 88 of the hopper means 29a is folded against the bottom flap 82 in the manner illustrated in FIGURE 11, whereby the interlocking tabs 92 thereof are adapted to interlock in the resulting openings in the bottom flap 83 in the manner previously described, so that the bottom flaps 82, 88 and 83 are mechanically locked together and form the bottom wall means 25a of the container 67.

Thereafter, the side panels 93 and 94 of the hopper means 29 are moved through the opening 27a of the front side wall means 21a of the container 67 in the manner previously described for the panels 60 and 61 of the container 20 to permit the front panel 90 to close the opening 27a in the manner illustrated in FIGURE 7.

When the hopper means 29a is opened by moving the front panel 90 of the hopper means 29a outwardly, the side panels 93 and 94 are drawn outwardly therewith until the ears 98 thereof engage against the inside surface of the front side wall means 21a in the manner illustrated in FIGURE 9, whereby it can be seen that the container 67 of this invention operates in the same manner as the container 20 previously described.

Therefore, it can be seen that this invention provides improved containers each having dispensing hopper means for attractively displaying and dispensing the contents of the containers.

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 the statutes, other forms may be used, all coming within the scope of the claims which follow.

What is claimed is:

1. A container comprising a plurality of wall means including top and bottom walls defining an article-receiving compartment therebetween, one of said wall means having an opening provided therein and interconnected to said compartment, said opening extending from the bottom wall means to an edge of said one wall means spaced from the top wall means, said bottom wall means including three panels disposed in stacked relation and spanning the bottom of said container, and a hopper means for opening and closing said opening, said hopper means being hinged to one of said three panels, the inner and outermost panels having means interconnecting the same together, the middle panel having an opening passing therethrough and through which said interconnecting means pass.

2. A container as set forth in claim 1 wherein said hopper means is hinged to said middle panel.

3. A container as set forth in claim 1 wherein said hopper means is hinged to said outermost panel.

4. A blank for forming a container having a hopper means comprising a plurality of foldably connected walls for forming said container, three of said walls being adapted to be disposed in stacked relation and spanning the bottom of said container to form the bottom wall means of said container, and a hopper structure foldably connected to one of said three walls, the inner and outermost walls of said three walls having means for interconnecting the same together, the middle wall of said three walls having an opening passing therethrough and through which said interconnecting means can pass.

5. A blank as set forth in claim 4 wherein said hopper structure is hinged to said middle wall of said three walls.

6. A blank as set forth in claim 4 wherein said hopper structure is hinged to said outermost wall of said three walls.

References Cited by the Examiner

UNITED STATES PATENTS

1,009,804 11/11 Sugarman.
1,546,600 7/25 Morris 222—531
2,320,665 6/43 Shearer.
2,684,792 7/54 Kraus 222—457
2,886,252 5/59 Leone 222—457 X
3,133,689 5/64 Rosai 229—17

LOUIS J. DEMBO, Primary Examiner.