

Feb. 21, 1967

W. C. BECKER ETAL

3,305,159

OPENING MEANS FOR A CONTAINER

Filed Oct. 11, 1963

5 Sheets-Sheet 1

FIG-1

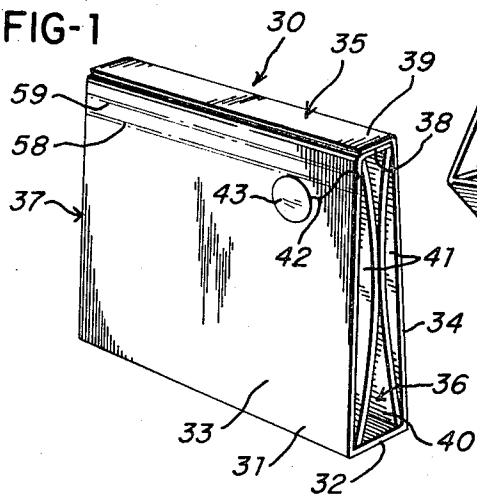


FIG-2

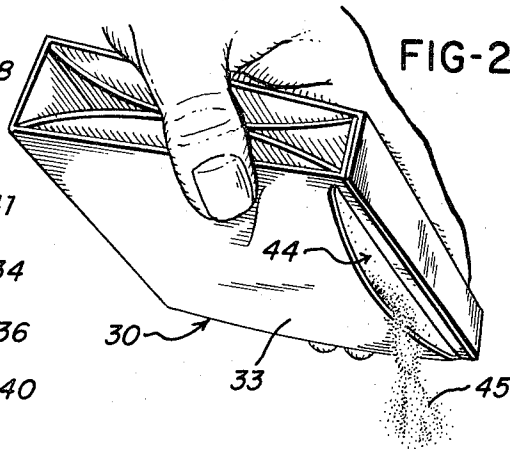


FIG-3

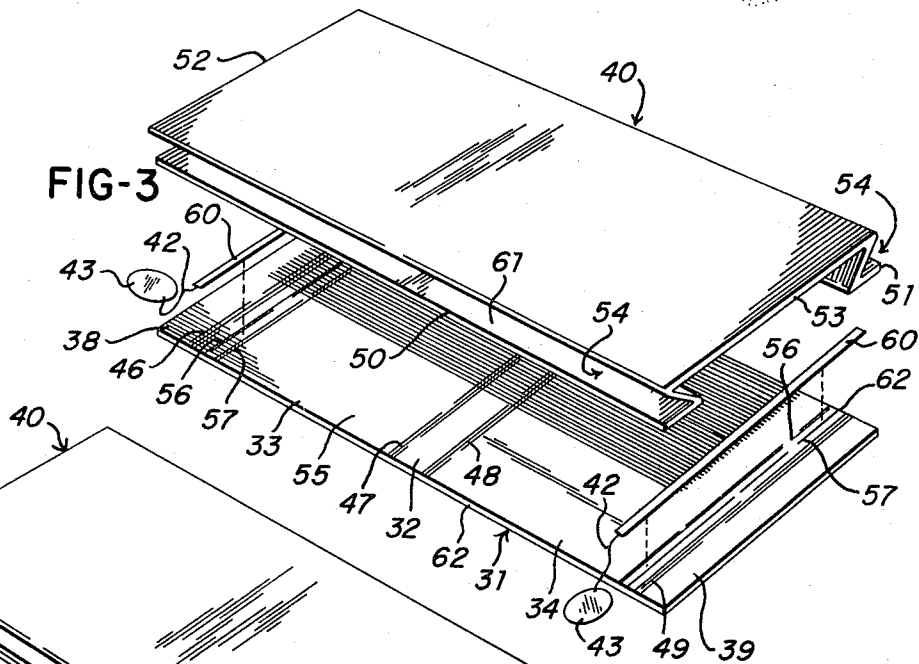
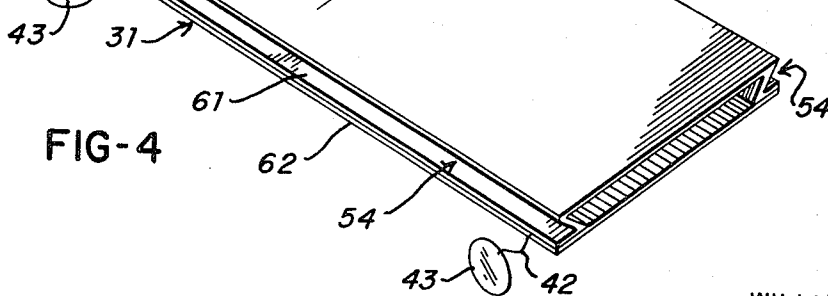


FIG-4



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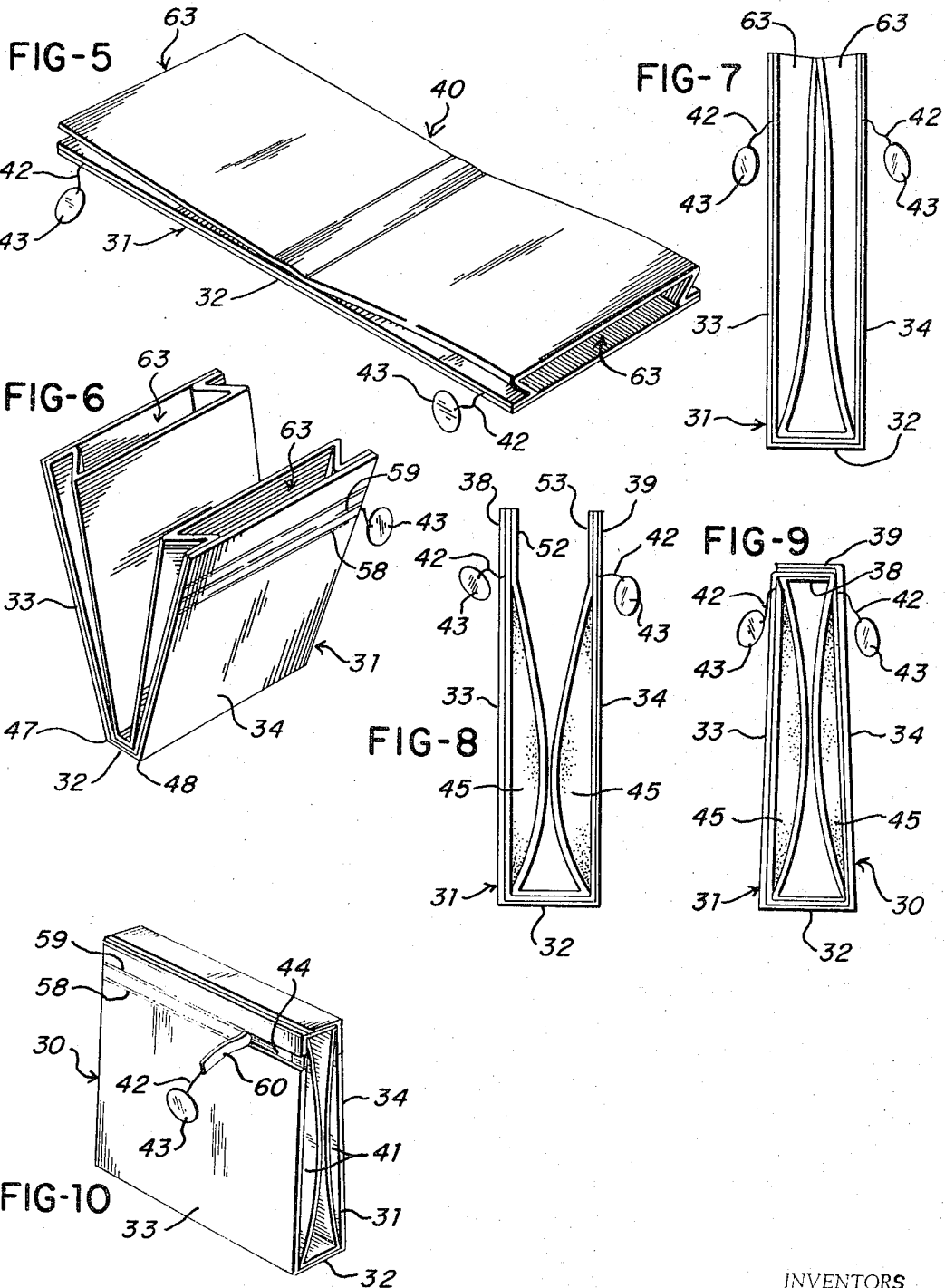
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5 Sheets-Sheet 2



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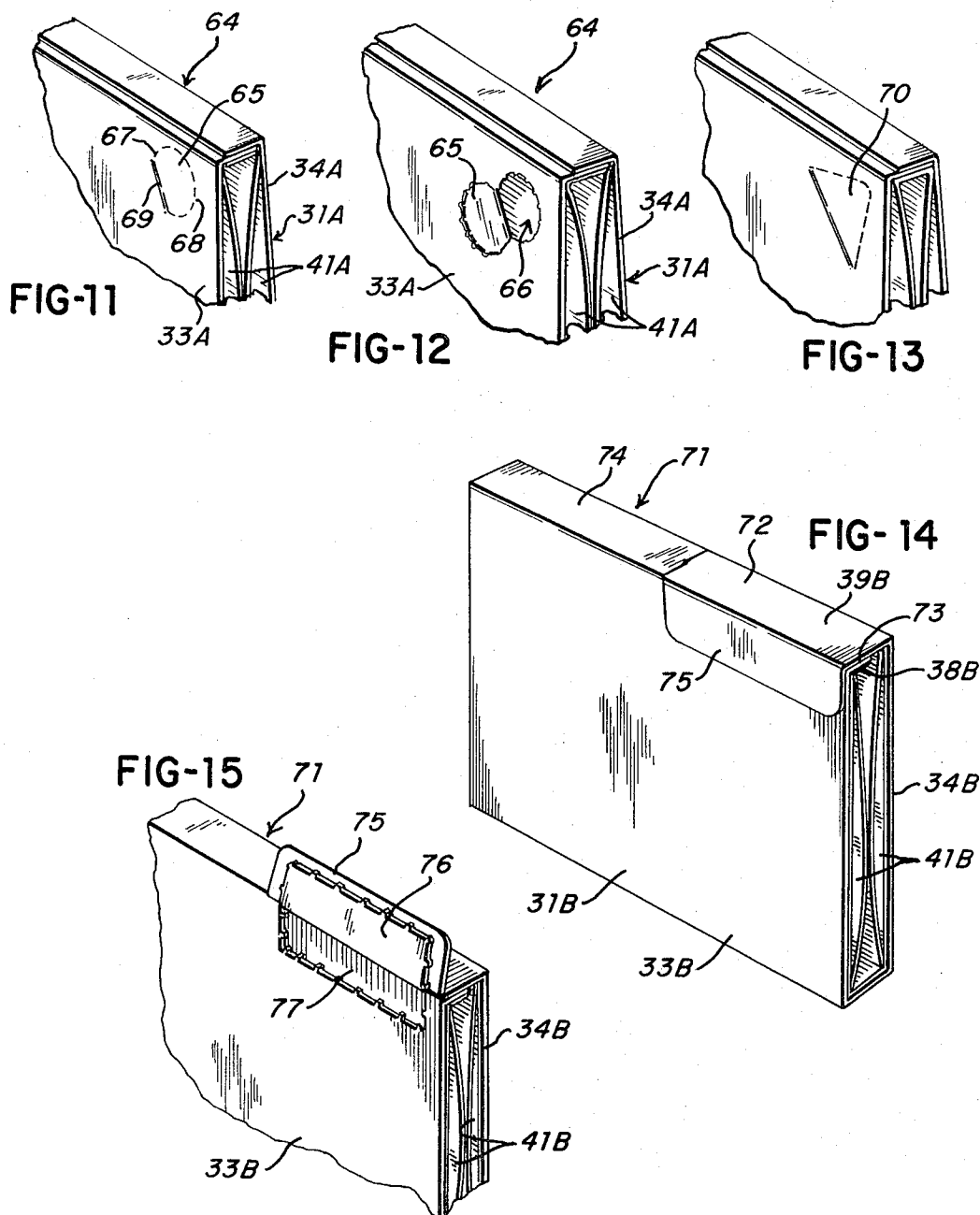
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5 Sheets-Sheet 3



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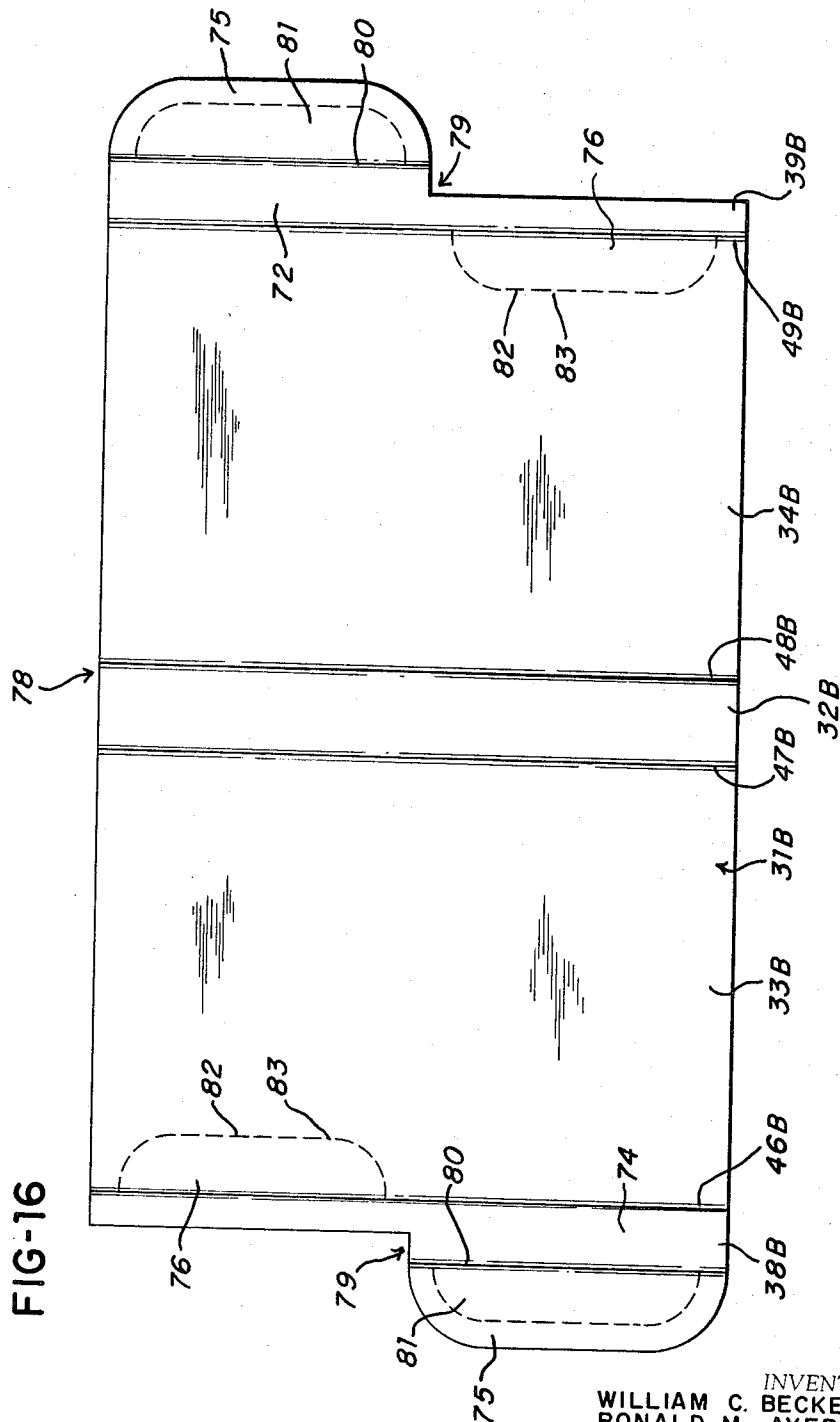
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5 Sheets-Sheet 4



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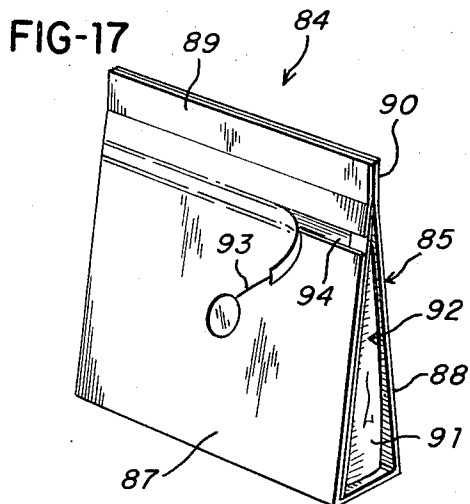
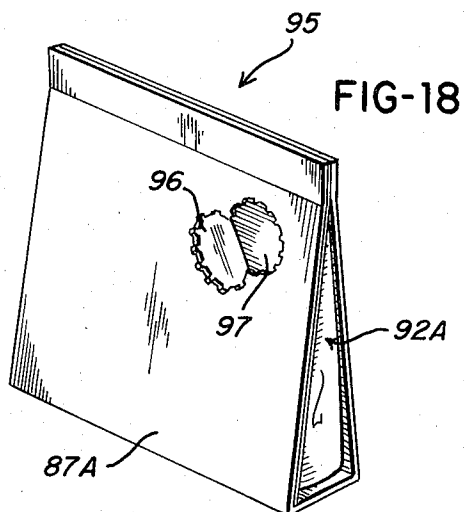
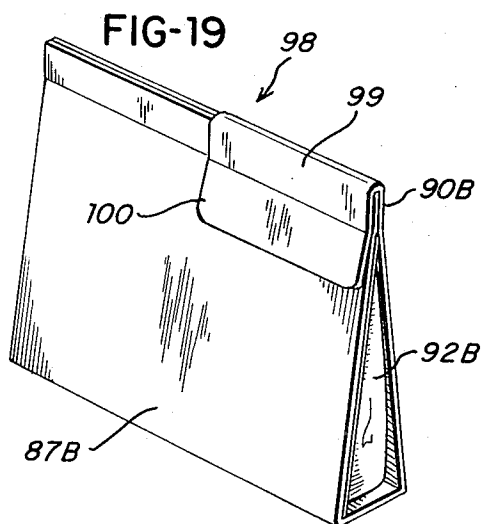
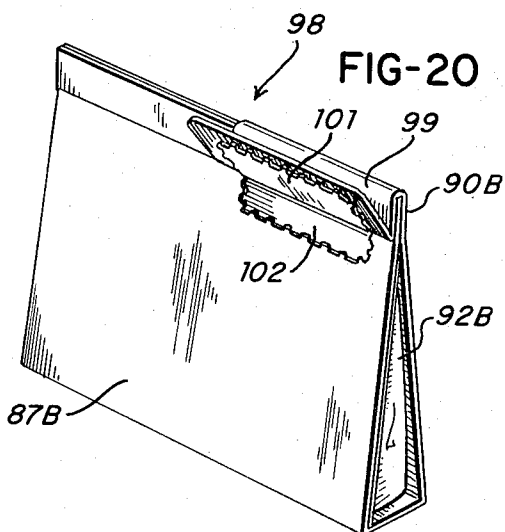
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OPENING MEANS FOR A CONTAINER

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5 Sheets-Sheet 5



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OPENING MEANS FOR A CONTAINER

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Filed Oct. 11, 1963, Ser. No. 315,591

7 Claims. (Cl. 229-16)

This invention relates to an improved container construction as well as to an improved method for making such a container construction or the like.

It is well known from the copending patent application, Reynolds Metals Company's Docket No. 4224-M, that a relatively rigid board means can be provided for forming the exterior wall means of the container and a relatively flexible sheet of material can be disposed in the container and cooperate with the board means to define product-containing pouch means between the inner surface means of the board means and the sheet means.

However, the aforementioned copending patent application does not disclose any means for dispensing the product from the product-containing pouch means other than means for opening the top wall means of the container.

According to the teachings of this invention, however, improved opening means are provided for such a container or the like wherein the product can be dispensed through the board means of the container without requiring opening of the top wall means of the container whereby a desired quantity of the product can be dispensed and, thereafter, the container can be stored in its compact condition without requiring refolding of the container.

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

Another object of this invention is to provide improved methods for making 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 container of this invention.

FIGURE 2 is a perspective view illustrating a method for dispensing the product from the container of FIGURE 1.

FIGURE 3 is an exploded perspective view illustrating the parts utilized to form the container of FIGURE 1.

FIGURE 4 is a view similar to FIGURE 3 and illustrates the parts of FIGURE 3 in their partially assembled position.

FIGURES 5 and 6 are perspective views illustrating other steps in forming the container of FIGURE 1 from the structure illustrated in FIGURE 3.

FIGURES 7-9 are end views illustrating other steps in forming the container of FIGURE 1.

FIGURE 10 is a perspective view similar to FIGURE 1 and illustrates an initial step in opening the container of FIGURE 1.

FIGURE 11 is a fragmentary, perspective view similar to FIGURE 1 and illustrates another embodiment of this invention.

FIGURE 12 is a view similar to FIGURE 11 and illustrates the opening means thereof disposed in the open position thereof.

FIGURE 13 is a view similar to FIGURE 11 and illustrates another embodiment of this invention.

FIGURE 14 is a perspective view illustrating still another container construction of this invention.

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FIGURE 15 is a fragmentary, perspective view illustrating the opening means of the container of FIGURE 14 in its opened position.

FIGURE 16 is a plan view illustrating the blank of this invention for forming the container of FIGURE 14.

FIGURE 17 is a perspective view illustrating still another container of this invention.

FIGURE 18 is a view similar to FIGURE 17 and illustrates another embodiment of this invention.

FIGURE 19 is a view similar to FIGURE 17 and illustrates still another embodiment of this invention.

FIGURE 20 is a view similar to FIGURE 19 and illustrates the opening means of the container of FIGURE 19 in its opened position.

While the various features of this invention are hereinafter described and illustrated as being particularly adaptable for providing a container for merchandising a desired product or products, 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 purposes 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 30 and comprises a substantially rigid board means 31 forming the exterior wall means of the container 30, the board means 31 being suitably folded in a manner hereinafter described to provide a bottom wall means 32, opposed side wall means 33 and 34 and top wall means 35 whereby the container 30 has opposed opened end walls 36 and 37 in a manner similar to the containers disclosed in the aforementioned copending patent application.

The top wall means 35 of the container 30 is provided by a pair of top flaps 38 and 39 respectively connected to the side wall means 33 and 34 and secured in overlapping relation by a suitable adhesive to close the container 30 in the configuration illustrated in FIGURE 1.

The board means 31 of the container 30 of this invention cooperates with a flexible liner or sheet means 40 disposed in the container 30 in a manner hereinafter described to define a pair of product-containing pouch means 41 whereby the product disposed in the pouch means 41 is fully protected by the rigid board means 31 in substantially the same manner as set forth in the aforementioned copending patent application, the flexible sheet means 40 cooperating with the inner surface means of the side wall means 33 and 34 to define the pouch means 41 in the manner hereinafter described.

When the ultimate consumer desires to open the container 30 to dispense some of the product from at least one of the pouch means 41, the ultimate consumer merely grasps a tear strip means or string 42 having a grasping portion 43 temporarily secured to one of the side wall means 33 and 34 and pulls the same relatively to the container 30 in the manner illustrated in FIGURE 10 to tear completely through the respective side wall means 33 or 34 to define a slot 44 therethrough which is interconnected to the interior of the respective product-containing pouch means 41.

Thereafter, the ultimate consumer merely inverts the container 30 in the manner illustrated in FIGURE 2 and by slightly squeezing the container 30, the slot means 44 in the side wall means 33 bows outwardly to permit the product 45 to be readily dispensed out of the slot means 44 of the container 30.

Therefore, it can be seen that the ultimate consumer need only open one of the pouch means 41 by the respec-

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tive tear string 42 to dispense all or part of the product from that particular pouch means 41 in the manner illustrated in FIGURE 2.

Thereafter, the ultimate consumer can restore the container 30 in the position illustrated in FIGURE 1 until it is desired to dispense the rest of the product from the open pouch means 41 thereof or from the unopened pouch means 41 thereof in the manner previously described.

Therefore, it can be seen that this invention provides an improved container having novel means for providing opening means in the side wall thereof so that the product in the product-containing pouch means of the container can be readily dispensed when desired.

The method for forming the container 30 of this invention will now be described.

Referring now to FIGURE 3, the rigid board means 31 of this invention can be supplied in substantially rectangular flat blank form or in roll form as set forth in the aforementioned copending patent application or the copending patent application, Serial No. 278,827, filed May 8, 1963.

As illustrated in FIGURE 3, the board means 31 of this invention is transversely scored by score or fold lines 46, 47, 48 and 49 to respectively divide the board means 31 into the top flap 38, side wall means 33, bottom wall means 32, side wall means 34 and top flap 39.

The flexible liner or sheet means 40 of this invention is illustrated in FIGURE 3 and is formed from a substantially rectangular sheet of material having opposed side edges 50 and 51 and opposed end edges 52 and 53. Alternately, the sheet means 40 could be supplied from a supply roll thereof.

In the embodiment illustrated in FIGURE 3, the sheet of material 40 is substantially wider than the board means 31 whereby the opposed sides of the sheet of material 40 can be reversely folded to form gussets 54 at the opposed side edges 50 and 51 thereof for a purpose hereinafter described.

While the board means 31 and liner means 40 could be formed of any suitable material and in any suitable manner, the embodiments thereof illustrated in the drawings are formed of metallic foil laminations in the manner set forth in the aforementioned copending patent applications.

However, it is to be understood that the containers of this invention could be formed without metallic foil. For example, the board means could be polycoated board or plain board and the liner means could be polycoated paper or plain paper, if desired.

Further, the sheet means 40 of this invention could be so constructed and arranged that the same is adapted to be fin-sealed to the board means 31 rather than provide the gussets 54 in much the same manner as set forth in the first aforementioned copending patent applications.

The board means 31 has the inner surface means 55 of the side wall means 33 and 34 thereof provided with parallel and spaced die cuts 56 and 57 which cut partially through the board means 31 for a purpose hereinafter described.

The exterior side of the side wall means 33 and 34 of the board means 31 is provided with like spaced parallel die cut 58 and 59 in the manner illustrated in FIGURES 6 and 10 to partially cut through the board means 31 in the region of the die cuts 56 and 57 thereof for a purpose now to be described.

The tear strings or strips 42 are adapted to be disposed respectively between the die cuts 56 and 57 on the inner surface means 55 of the side wall means 33 and 34 in the manner illustrated in FIGURE 3 so that when the same are pulled relative to the container 30 in the manner previously described, the same will tear through the respective side wall means 33 and 34 in a manner facilitated by the die cuts 56-59.

In order to not only secure the tear strings 42 in place,

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but to also assure that the same will cut evenly through the side wall means 33 and 34 of the container 30, suitable tapes 60 are superimposed on the tear strings 42 and are adhesively secured to the board means 31 between the die cuts 56 and 57 in the manner illustrated in FIGURE 3.

After the parts illustrated in FIGURE 3 have been provided in the manner previously described, the flat portions 61 of the flexible sheet means 40 are adapted to be heat sealed or otherwise secured to the peripheral edges 62 of the board means 31 in the manner illustrated in FIGURE 4 whereby the gussets 54 of the sheet means 40 permit the sealed liner means 40 and board means 31 to define a sleeve-like structure as illustrated in FIGURE 4 with the tear strings 42 disposed between the liner means 40 and the board means 31.

Thereafter, the transverse medial portion of the flexible sheet means 40 is heat sealed or otherwise secured to the bottom wall means 32 of the board means 31 in the manner illustrated in FIGURE 5 to define two opposed pockets 63 separated from each other at the bottom wall means 32 of the board means 31.

Subsequently, the interconnected flexible sheet means 40 and rigid board means 31 are folded on the fold lines 47 and 48 of the board means 31 in the manner illustrated in FIGURE 6 whereby the open ends of the pocket portions 63 are disposed substantially vertically upwardly in the manner illustrated in FIGURES 6 and 7.

Thereafter, the desired product 45 can be disposed in the pockets 63 through the upper open ends thereof whereby the upper open ends of the pockets 63 can be sealed closed by heat sealing or otherwise securing the end portions 52 and 53 of the flexible sheet means 40 to the top flaps 38 and 39 of the board means 31 in the manner illustrated in FIGURE 8. In this manner, the pouch means 41 have been completely formed to contain the product 45 therein.

In order to close the structure illustrated in FIGURE 8, the top flap 38 is first folded over the open end of the container 30 and, thereafter, the top flap 39 is folded over the top flap 38 in the manner illustrated in FIGURE 9 and is secured thereto in any suitable manner, such as by suitable adhesive or the like whereby the container 30 of this invention is now complete.

If desired, the handle or grasping portions 43 of the respective tear strings 42 can then be temporarily secured to the respective side wall means 33 and 34 of the container 30 in the manner illustrated in FIGURE 1.

Therefore, it can be seen that it is a relatively simple process to form the container 30 of this invention from the rigid board means 31 and the flexible sheet means 40 while still providing two product-containing pouch means 41 that are fully protected by the board means 31 and can be opened by merely opening the side wall means 33 and 34 without requiring the opening of the top wall means 35 of the container 30 in the manner set forth in the aforementioned copending patent application.

While the container 30 of this invention has been previously described as utilizing tear string means 42 to provide means for opening the respective side wall means 33 and 34 thereof to dispense the desired product from the respective product-containing pouch means 41, it is to be understood that the side wall means 33 and 34 of the container 30 could be provided with other opening means to dispense the product.

For example, reference is made to FIGURE 11 wherein another container of this invention is generally indicated by the reference numeral 64 and parts thereof similar to the container 30 previously described are indicated by like reference numerals followed by the reference letter "A."

As illustrated in FIGURE 11, each of the side wall means 33A and 34A of the rigid board means 31A has a flap 65 carved therefrom in a manner to provide an opening 66, FIGURE 12, in the respective side wall means 33A or 34A which interconnects with the interior of the respec-

tive pouch means 41A so that the product can be dispensed out of the opening 66 by inverting the container 64 in the manner illustrated in FIGURE 2.

Each flap 65 is so constructed and arranged that the same has part of the perimeter thereof defined by perforations or die cuts 67 so that the flap 65 is temporarily secured to the respective side wall means 33A or 34A by bridging portions 68 of the board means 31A. The remainder of the periphery of the respective flap 65 is defined by score means 69 to hinge the respective flap 65 to the board means 31A.

When the ultimate consumer desires to open a particular pouch means 41A of the container 64, the ultimate consumer merely breaks the bridging portions 68 at the perforation 67 of the particular flap 65 and opens the same outwardly in the manner illustrated in FIGURE 12 to provide the opening 66 through which the product can be dispensed when the container 64 is inverted in the manner illustrated in FIGURE 2. Thereafter, the ultimate consumer can reclose the flap 65 back to the position illustrated in FIGURE 11 to permit the container 64 to be stored until further dispensing of the product therefrom is desired.

However, it is to be understood that the flap means 65 could be so constructed and arranged that the same can be completely removed from the respective side wall means 33A or 34A of the container 64, if desired.

Further, while a substantially circular flap means 65 has been illustrated in FIGURES 11 and 12, it is to be understood that the particular configuration of the flap means 65 can vary as desired.

For example, a substantially triangular flap means 70 is illustrated in FIGURE 13 and functions in the same manner as the flap means 65 previously described.

Another container of this invention is generally indicated by the reference numeral 71 in FIGURE 14 and parts thereof similar to the container 30 previously described are indicated by like reference numerals followed by the reference letter "B."

As illustrated in FIGURE 14, the container 71 is substantially identical to the container 30 previously described except that the tear strings 42 of the container 30 have been eliminated and other opening means have been provided.

In particular, the top flap 39B of container 71 has a right hand portion 72 disposed over the right hand portion 73 of the other flap 38B in the manner illustrated in FIGURE 14 while the left hand portion 74 of the top flap 38B is disposed over a left hand portion of the top flap 39B.

In addition, each portion 72 and 74 of the flaps 39B and 38B has a liftable flap means 75 extending over the respective side wall means 33B and 34B in the manner illustrated in FIGURE 14 to provide opening means for the particular pouch means 41B thereof.

As illustrated in FIGURE 15, each side wall means 33B and 34B of the container 71 has an openable flap 76 carved therefrom whereby the openable flap 76 provides an opening 77 in the respective side wall means 33B or 34B when the openable flap 76 is moved to the opened position thereof.

The liftable flaps 75 of the top flaps 39B and 38B are respectively secured to the openable flaps 76 of the side wall means 33B and 34B whereby the container is normally disposed in the position illustrated in FIGURE 14.

However, when it is desired to dispense the product from one of the pouch means 41B in the container 71, the ultimate consumer merely grasps the respective liftable flap 75 and raises the same relative to the container 71 in the manner illustrated in FIGURE 15 whereby the respective openable flap 76 opens from the respective side wall means 33B or 34B to provide the opening 77 through which the product in the respective pouch means 41B can be dispensed.

Thereafter, the particular liftable flap 75 can be moved to its closed position to close the respective openable flap 76 so that the container 71 can be stored or the like.

While the container 71 is formed in the same manner as the other containers of this invention, the rigid board means 31B thereof can be formed from a blank of this invention generally indicated by the reference numeral 78 in FIGURE 16.

As illustrated in FIGURE 16, the blank 78 is provided with suitable score or fold lines 46B, 47B, 48B and 49B to respectively divide the blank 78 into the top flap 38B, the side wall means 33B, the bottom wall means 32B, the side wall means 34B and the top flap 39B.

The flaps 38B and 39B are respectively cut away in the region of the reference numerals 79 to permit the respective portion 72 and 74 of the flaps 39B and 38B to be disposed over the cutway portions 79 thereof in the manner illustrated in FIGURE 14.

The liftable flaps 75 of the top flaps 38B and 39B are respectively foldably connected to the portions 74 and 72 thereof by score or fold lines 80 and have the glueable area thereof designated by the reference numerals 81 which are to be secured to a respective openable flap 76.

As illustrated in FIGURE 16, each openable flap 76 has part of the perimeter thereof defined by perforations or die cuts 82 whereby the same is initially secured to the respective side wall means 33B or 34B by bridging portions 83 of the board means 31B, the remainder of the openable flaps 76 being hinged to the respective top flap 38B or 39B at the score line 46B or 49B.

Therefore, it can be seen that when the blank 78 illustrated in FIGURE 16 is secured to a flexible sheet means in a manner similar to the sheet means 40 previously described, the same can be folded together in the manner illustrated in FIGURE 14 to provide the container 71 which can have the pouch means 41B thereof respectively opened in the manner previously described.

Therefore, it can be seen that this invention not only provides improved containers, but also improved methods for making the same or the like.

While the various containers of this invention have heretofore been described as having substantially rectangular cross-sectional configurations, it is to be understood that the same can be formed with substantially triangular cross-sectional configurations in any of the manners set forth in the aforementioned copending patent applications.

For example, reference is made to FIGURE 17 wherein another container of this invention is generally indicated by the reference numeral 84 and comprises a rigid board means 85 defining bottom wall means 86, opposed side wall means 87 and 88 and top flap means 89 and 90 respectively foldably connected to the side wall means 87 and 88 and secured together to close the container 84.

A flexible sheet 91 is disposed in the container 84 and cooperates with the inside surface of the side wall means 87 to define a product-containing pouch means 92 in the manner previously described.

However, a tear string 93 is disposed between the inside surface of the side wall means 87 and the sheet means 91 in a manner similar to the tear string 42 previously described whereby the tear string 93 is adapted to tear through the side wall means 87 to define a slot means 94 therethrough which is interconnected to the interior of the product-containing pouch means 92 so that the product can be dispensed out through the slot means 94 in the manner previously described.

Therefore, it can be seen that the container 84 of this invention functions in substantially the same manner as the container 30 previously described except that the same has a single product-containing pouch means 92 and has a substantially triangular cross-sectional configuration.

Another container of this invention is generally indicated by the reference numeral 95 in FIGURE 18 and parts thereof similar to the container 84 previously described are indicated by like reference numerals followed by the reference letter "A."

The container 95 is substantially identical to the container 84 previously described except that the tear string 93 has been eliminated and the side wall means 87A thereof has an openable flap 96 carved therefrom, the openable flap 96 either being hinged to the side wall means 87A or being completely removable therefrom in substantially the same manner as the openable flaps 65 and 70 previously described.

In this manner, it can be seen that the openable flap 96 is adapted to provide an opening 97 in the side wall means 87A to provide means for dispensing the product from the product-containing pouch means 92A of the container 95 in the manner similar to the opening 66 previously described.

Another container of this invention is generally indicated by the reference numeral 98 in FIGURES 19 and 20, the container 98 being substantially identical to the container 84 previously described whereby like parts thereof are indicated by like reference numerals followed by the reference letter "B."

As illustrated in FIGURE 19, the container 98 is substantially identical to the container 84 except that the tear string 93 has been eliminated and the top flap 90B has an extension 99 provided with a liftable flap portion 100 respectively secured to an openable flap 101 carved from and hinged to the side wall means 87B whereby when the liftable flap 100 is lifted relative to the container 98, the same opens the openable flap 101 to provide an opening 102 leading to the interior of the product-containing pouch means 92B in substantially the same manner as the liftable and openable flaps 75 and 76 of the container 71 previously described.

Therefore, it can be seen that variations can be made from the structure of the containers of this invention while the resulting containers and methods still fall within the scope of the appended claims.

Accordingly, it can be seen that not only does this invention provide improved containers or the like, but also this invention provides improved methods for making 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 rectangular container comprising a single relatively rigid board means folded to define a pair of opposed side wall means of said container and opposed top and bottom wall means of said container, said wall means having inner surface means and peripheral edge means, and a single relatively flexible sheet means disposed in said container and having edge means of a facing surface means secured to said inner surface means at said peripheral edge means of said side, top and bottom wall means and transversely across said inner surface means of said bottom wall means to define a pair of separate sealed closed product-containing pouch means respectively disposed inside said container and having the interiors thereof defined between said inner surface means of said side wall

means and said facing surface means of said sheet means, said board means having openable means in each side wall means for permitting the product in the respective pouch means to be dispensed through the respective side wall means out of the exterior of said container.

2. A container as set forth in claim 1 wherein each said openable means comprises a tear strip means for tearing through said board means to provide an opening in said board means.

3. A container as set forth in claim 1 wherein each said openable means comprises a flap means in said board means, said flap means when opened providing an opening in said board means.

4. A rectangular container comprising a single relatively rigid board means folded to define a pair of opposed side wall means of said container and opposed top and bottom wall means of said container, said wall means having inner surface means and peripheral edge means, a single relatively flexible sheet means disposed in said container and having edge means of a facing surface means secured to said inner surface means at said peripheral edge means of said side, top and bottom wall means and transversely across said inner surface means of said bottom wall means to define a pair of separate sealed closed product-containing pouch means respectively disposed inside said container and having the interiors thereof defined between said inner surface means of said side wall means and said facing surface means of said sheet means, and a pair of tear strips respectively disposed between said side wall means and said sheet means, each tear strip when pulled relative to said container tearing through the respective side wall means to form an opening therein and through which the product in the respective pouch means can be dispensed out of the exterior of said container.

5. A container as set forth in claim 4 wherein each of said tear strips has a free end normally secured to the exterior surface of said board means.

6. A container as set forth in claim 4 wherein said board means is scored in the region of each tear strip to facilitate tearing of said board means.

7. A container as set forth in claim 4 wherein a tape means backs up each tear strip.

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