United States Patent

[11] 3,536,247

[72] Inventor **Peter Gadiel**
Chicago, Illinois

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[45] Patented **Oct. 27, 1970**

[73] Assignee **International Graphics & Packaging Corporation**
Chicago, Illinois
a corporation of Illinois

[54] **POUCH PACK**
7 Claims, 31 Drawing Figs.

[52] **U.S. Cl.** **229/17**
[51] **Int. Cl.** **B65d 5/72**
[50] **Field of Search** ..... 229/17, 17(RS); 221/305, 311, 33—63; 222/531, 564; 206/44.11

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Primary Examiner—Davis T. Moorhead
Attorney—Gary, Parker, Juettner, Pigott and Cullinan

ABSTRACT: A container formed of a collapsible blank cut and scored to define a body of rectangular transverse section formed with an opening in the front wall thereof and a flap hinged to the container adjacent the bottom of said front wall and adapted to cover said opening and to be extended at an incline thereto. The bottom of the container is inclined and extends downwardly from the back to the front wall adjacent the bottom thereof. Small articles that are disposed in the package tend to move downwardly towards the front thereof on the inclined bottom and are hand accessible when the front panel is inclined outwardly.

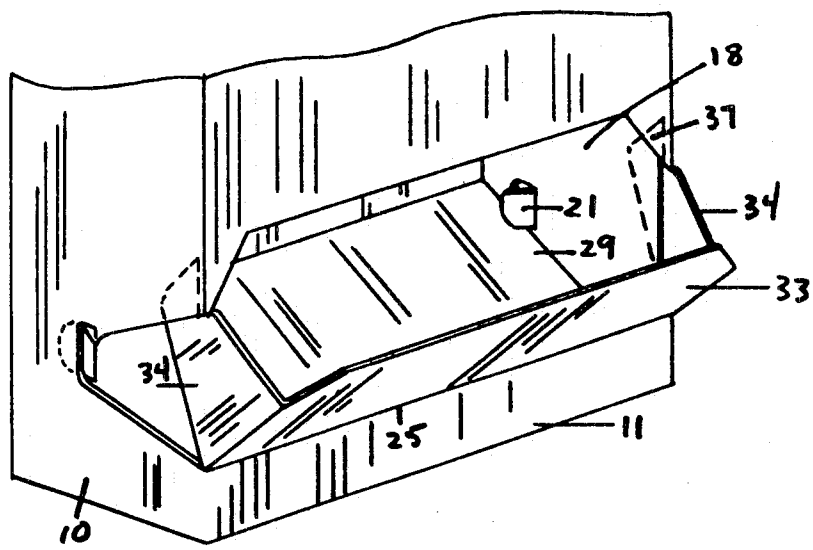


FIG 1.

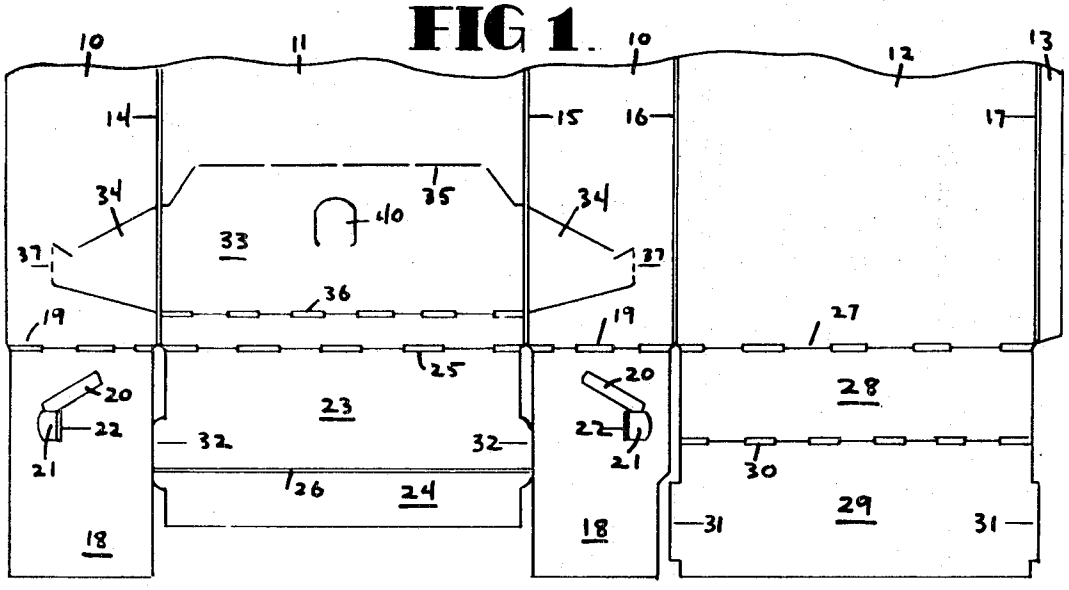


FIG 2.

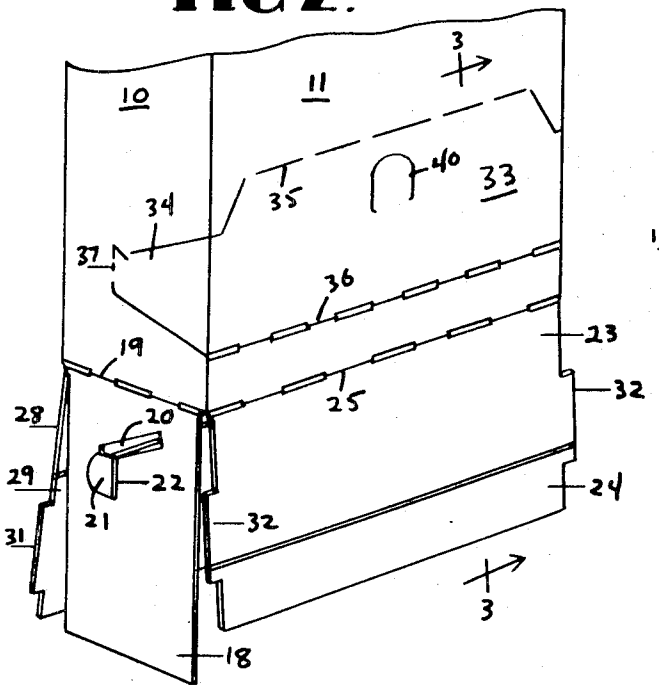
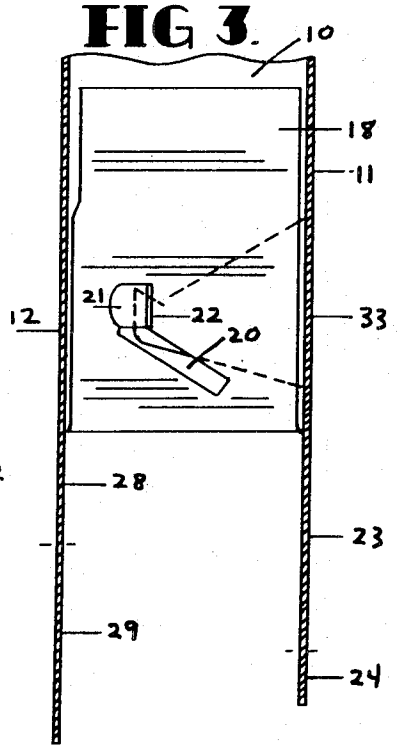


FIG 3.



Inventor
Peter Gadiel

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Attorneys

FIG 4.

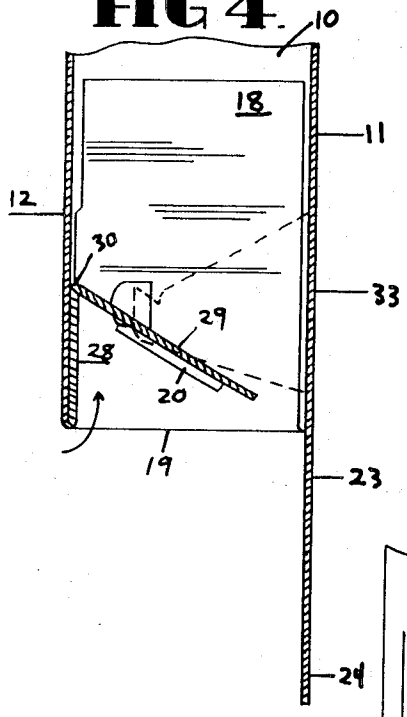


FIG 5.

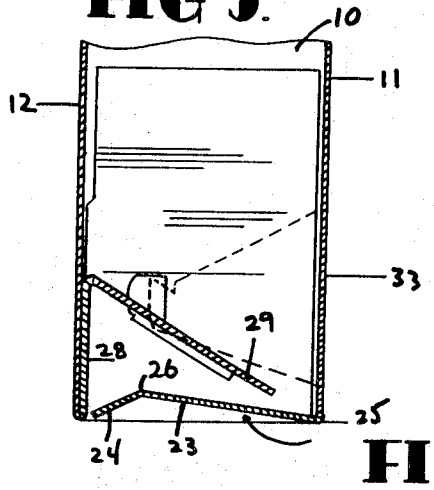


FIG 7.

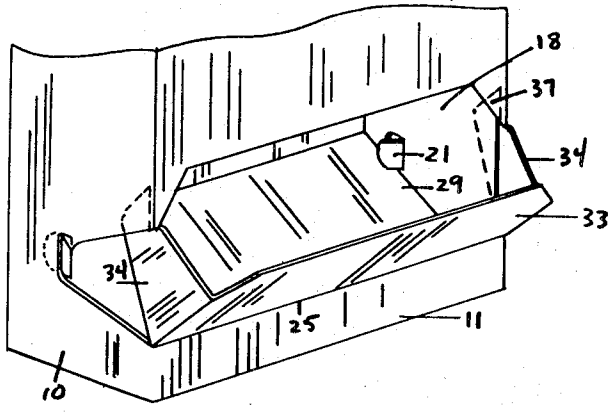


FIG 6.

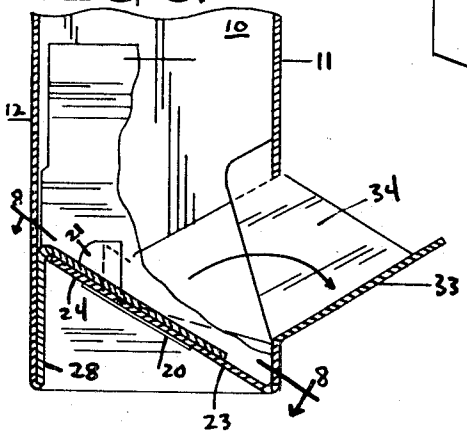
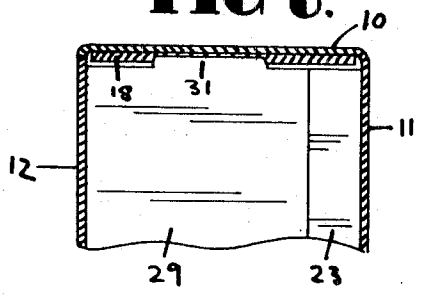


FIG 8.



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FIG 9.

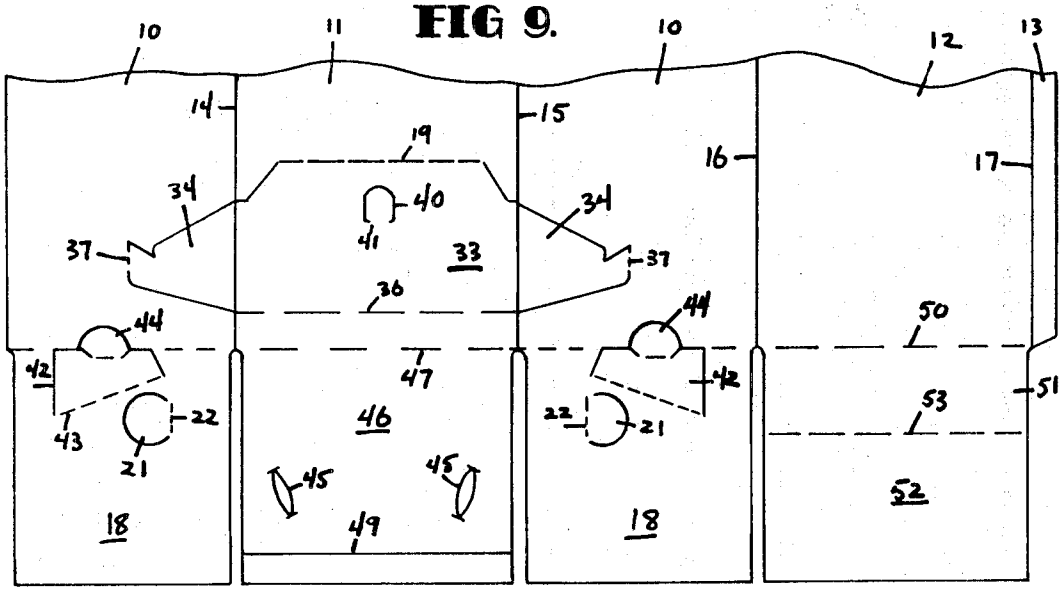


FIG 10.

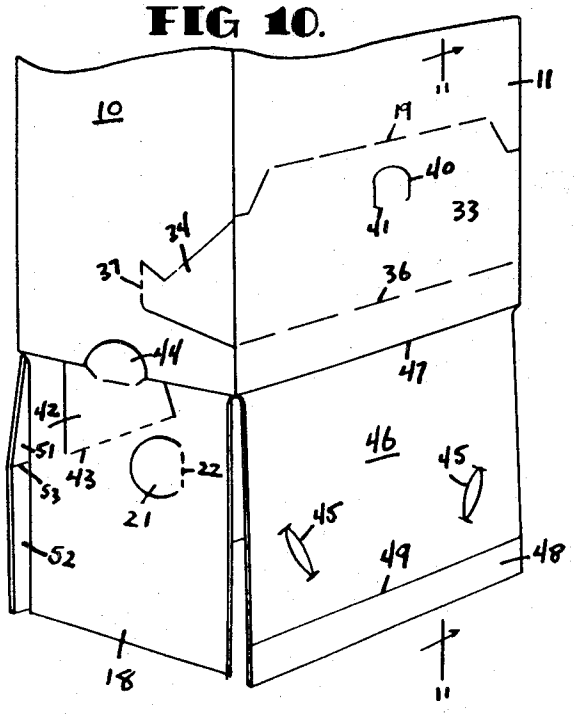
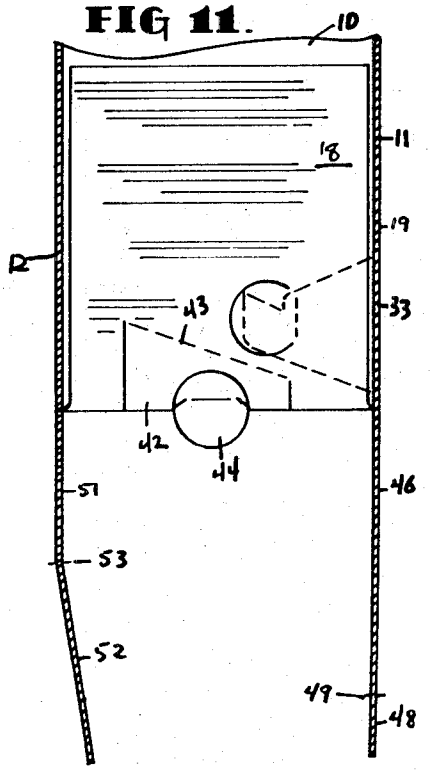


FIG 11.



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Peter Godiel
by Gary, Parker, Juettner, Pigott & Cullinan
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FIG 12.

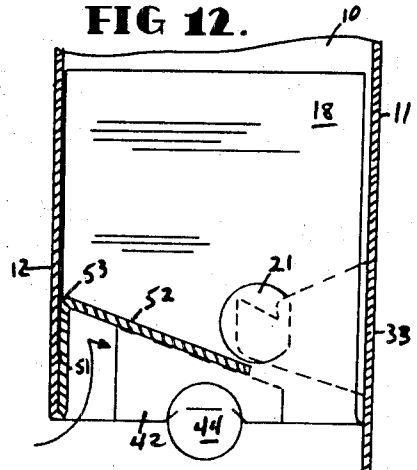


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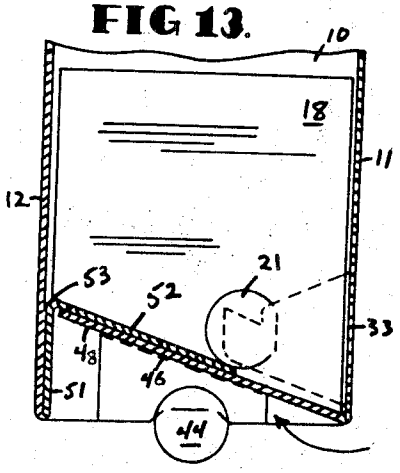


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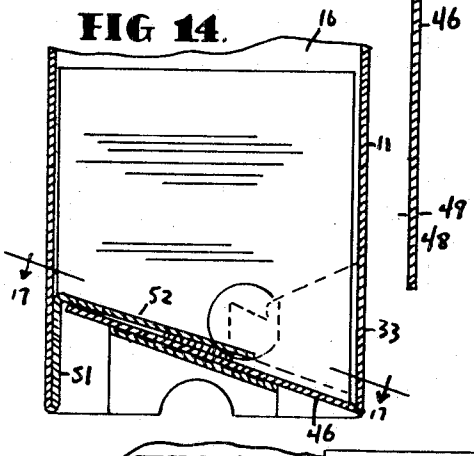


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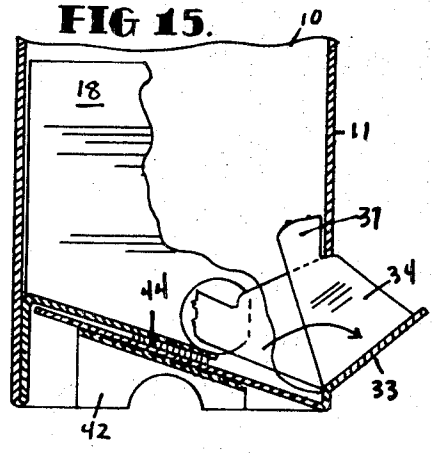


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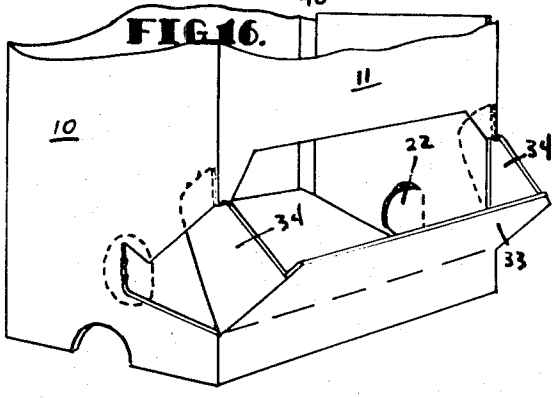
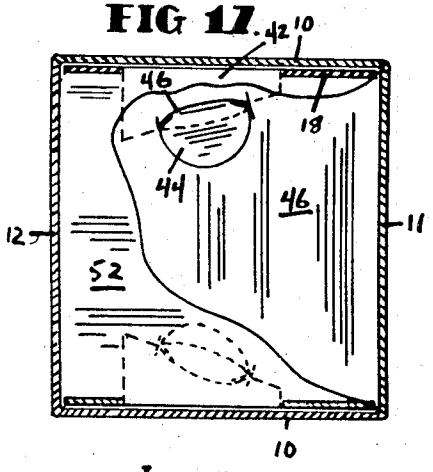


FIG 17.



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Peter Gadiel
by Gary, Parker, Juethner, Pigott & Cullinan
Attorneys

FIG 18.

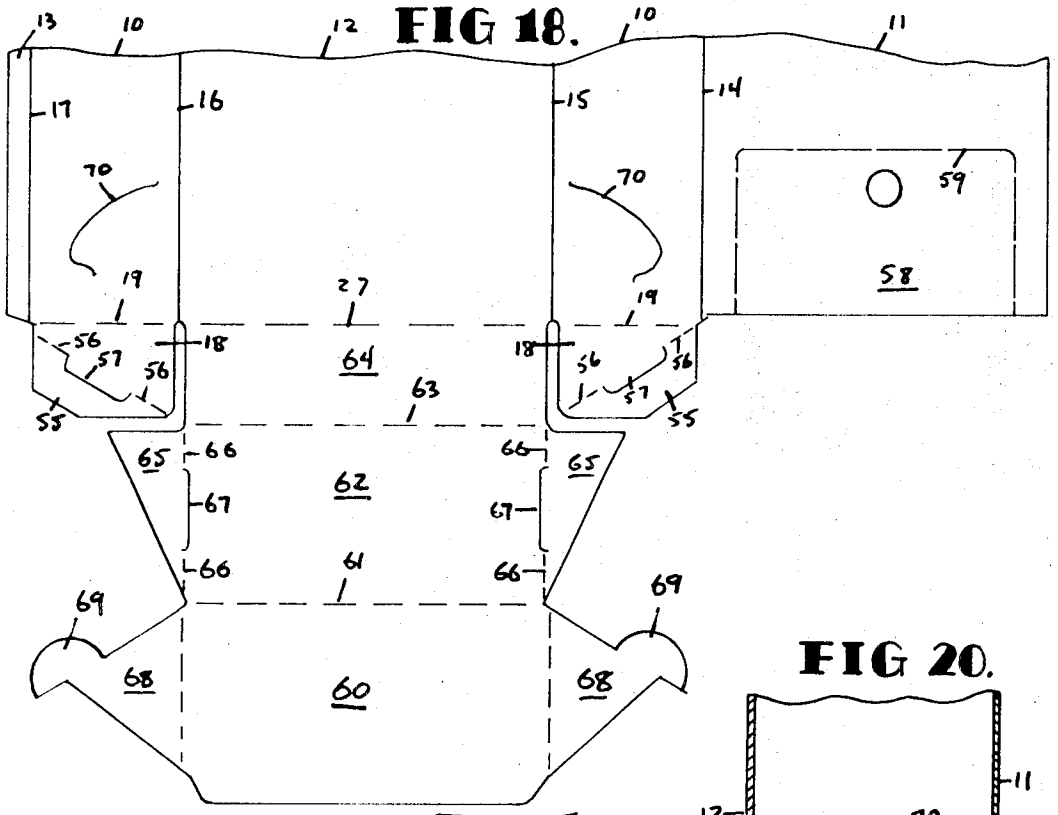


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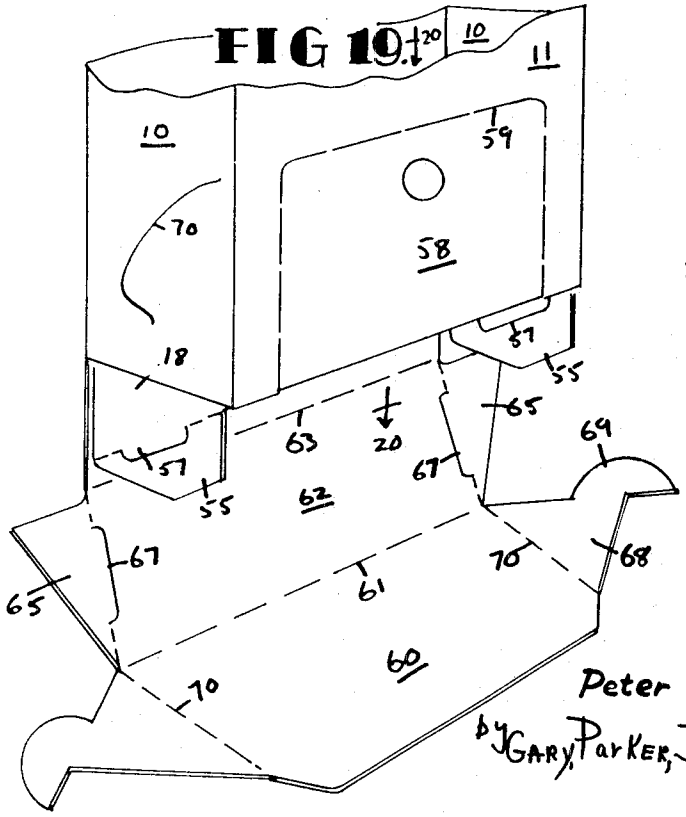
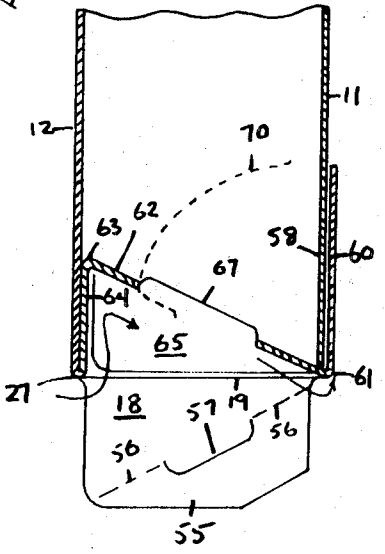


FIG 20.



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Peter Gadiel
by Gary, Parker, Juethner, Pigott & Cullinan
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FIG 21.

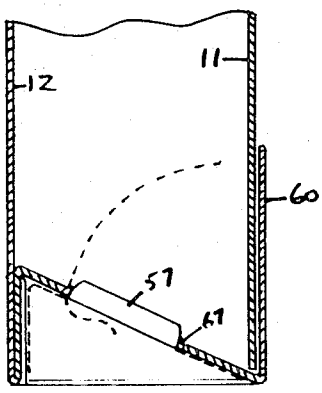


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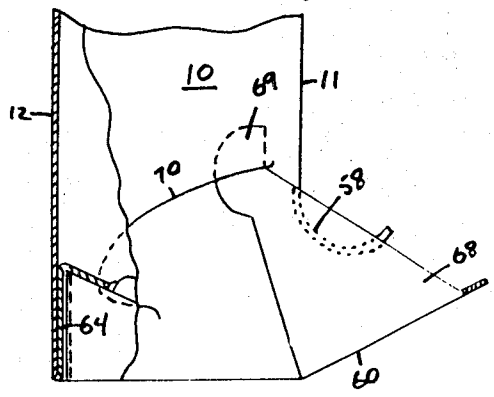


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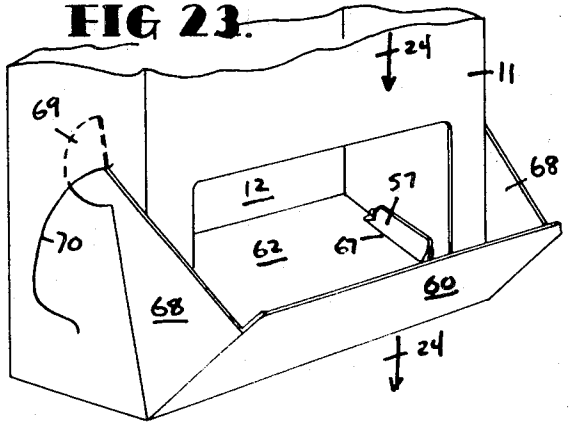
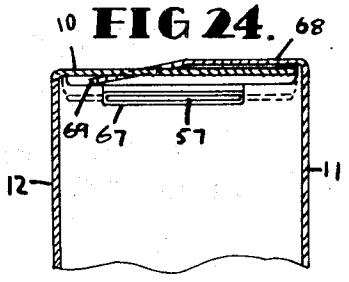


FIG 24.



Inventor
Peter Godiel

by Gary, Parker, Juettner, Pigott & Cullinan
Attorneys

FIG 25.

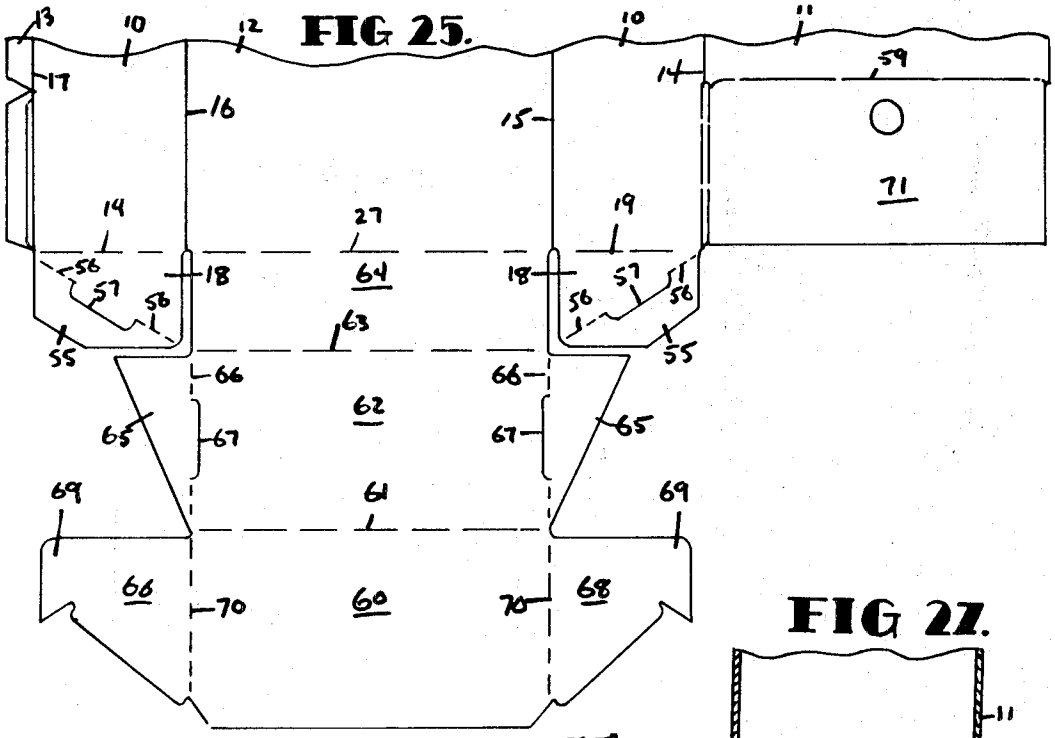


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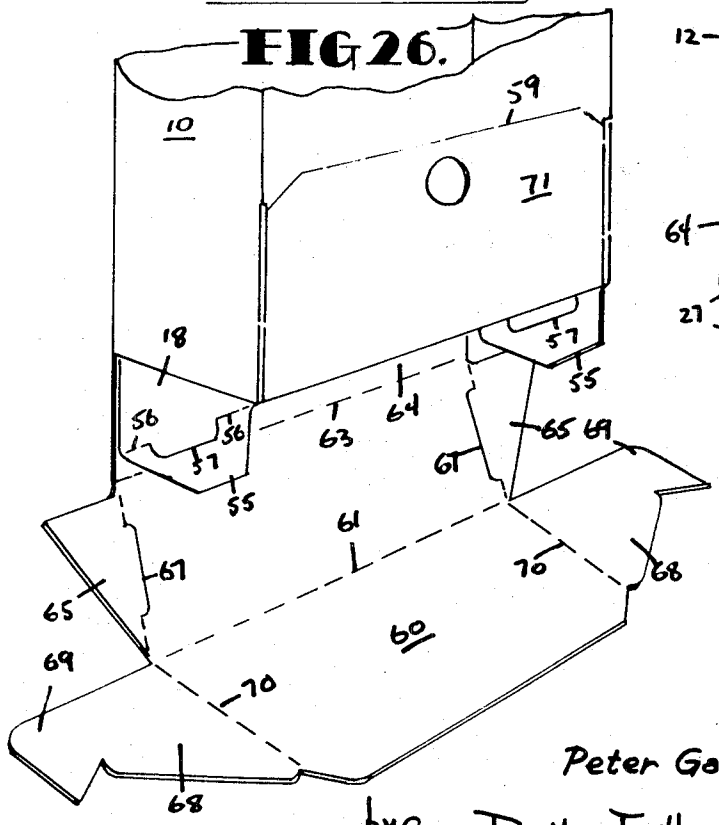
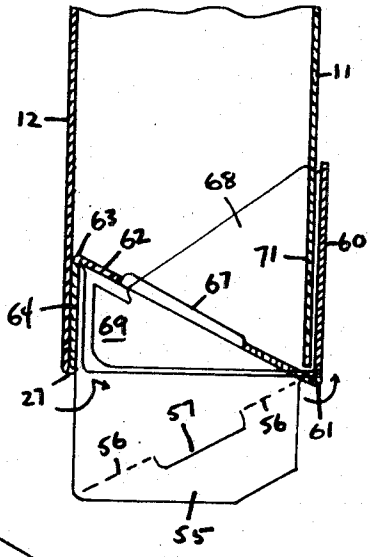


FIG 27.



Inventor
Peter Godiel

by Gary, Parker, Juettner, Pigott & Cullinan
Attorneys

FIG 28.

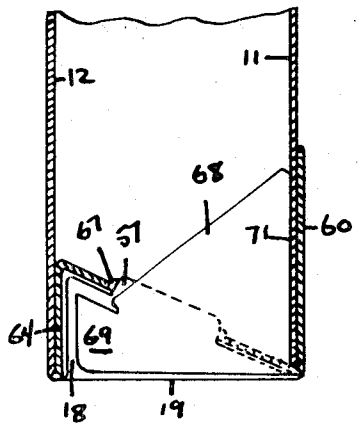


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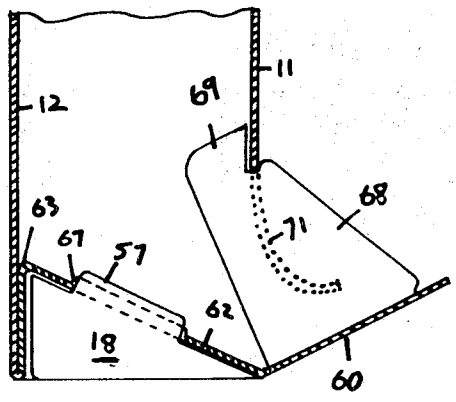


FIG 30.

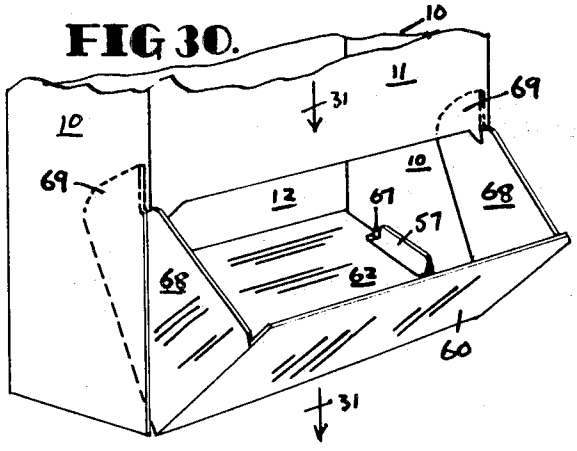
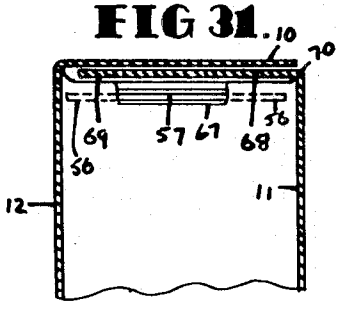


FIG 31.



Inventor
Peter Gadiel
by Gary, Parker, Juettner, Pigott & Cullinan
Attorneys

POUCH PACK

This invention relates to a dispensing package which I precisely define as a pouch pack and which is readily formed from a paperboard blank cut and scored to define a pair of opposed end walls, a rear wall, a front wall and a narrow flap hinged to the rear wall and securable to an end wall to form a tube of rectangular transverse section. The top of the container may be formed with conventional top closure flaps and the bottom comprises flaps extending from said walls to define an inclined bottom of one or more layers which are adapted to be retained in an inclined position by means of tabs or slots engaged with complementary tabs or slots formed on flaps which extend from the end walls, these end wall flaps being inturned wholly or in part against the end walls. The incline of the bottom flap or flaps is such that the incline extends downwardly from the rear wall to the front wall of the carton.

The front wall of the carton is formed with an opening and a closure flap therefor hinged to adjacent the lower edge of the front wall where it meets the inclined bottom. Means are further provided between side flanges on the aforesaid closure flap and the carton front wall or its inturned end wall flaps for retaining the front wall flap at an incline to the front wall and to define a hand entrance mouth whereby to permit access to the articles in the container and on its aforesaid inclined bottom.

My pouch pack may thus provide a storage and dispensing means for small packaged articles such as packages of salt, pepper, sugar, wrapped candies and the like articles, which are in part displayed when the front flap is disposed outwardly and the articles are resting on the inclined bottom. They are also readily withdrawn individually or in multiples as required in a most convenient manner and when desired the front flap may be tilted upwardly to close the pouch, that is to close the container opening, when temporarily desired.

The objects and advantages of the invention, its details of construction and arrangement of parts and economies thereof will be further apparent from a consideration of the following specification and accompanying drawings wherein:

FIG. 1 is a blank development of the lower half of a container formed in accordance with the present invention.

FIG. 2 is a perspective view of the blank of FIG. 1 set up in rectangular transverse section.

FIG. 3 is a fragmentary vertical section on line 3–3 of FIG. 2, but progressive thereto in that the end wall bottom closure flaps are folded up against the end walls.

FIG. 4 is a view progressive to that of FIG. 3, but with the rear wall bottom closure flap folded inwardly in inclined position.

FIG. 5 is another vertical sectional view progressive to that of FIG. 4 showing the front wall bottom closure flap partially extended within the container.

FIG. 6 is a view progressive to FIG. 5 showing the inclined flaps of the bottom and front walls fully inwardly disposed at an incline extending downwardly from the back to the front wall and with the front wall closure flap hinged outwardly and defining an opening in the front wall.

FIG. 7 is a perspective view of the bottom carton section shown in FIG. 6.

FIG. 8 is a fragmentary section on the line 8–8 of FIG. 6.

FIG. 9 is a blank development of a modified form of the pouch pack or container of the present invention.

FIG. 10 is a perspective view of the blank of FIG. 9 squared up in tubular form.

FIG. 11 is a section on the line 11–11 of FIG. 10, but with the flaps hinged to the side walls folded upwardly against the inner sides of the side walls.

FIG. 12 is a view progressive to that of FIG. 11 showing the flap hinged to the rear wall folded inwardly at an inclined position between the end walls.

FIG. 13 is a view progressive to that of FIG. 12 showing the flap hinged to the front wall disposed inwardly at an incline between the end walls and extending in plane parallel relationship to the bottom flap shown in FIG. 12.

FIG. 14 is a view progressive to that of FIG. 13 illustrating the locking arrangement of tabs extending from the end wall bottom closure flaps into interlocking engagement with the lowermost bottom closure flap.

FIG. 15 is a view progressive to that of FIG. 14 showing the front closure flap pivoted outwardly.

FIG. 16 is a perspective view of the bottom carton section shown in FIG. 15.

FIG. 17 is a section on the line 17–17 of FIG. 14.

FIG. 18 is a blank development of the lower section of another modified form of the pouch pack container of the present invention.

FIG. 19 is a perspective view of the blank of FIG. 18 with the sides squared up.

FIG. 20 is a vertical sectional view of the container of FIG. 19 on the line 19–19 with some of the bottom closure flaps in set up condition at an incline extending from the rear wall to the front wall of the container.

FIG. 21 is a view progressive to that of FIG. 20 with the remaining bottom closure flaps, that is those extending from the end walls, folded up and locked into interlocking engagement with the panels extending from the back wall of the panel hinged to the back wall of the container. FIG. 22 is a view progressive to that of FIG. 21 illustrating removal of a panel from the front wall of the container and the hinged open relationship of the lip flap.

FIG. 22 is a view progressive to that of FIG. 21 showing the front closure flap pivoted outwardly.

FIG. 23 is a perspective view of the container bottom shown in FIG. 22.

FIG. 24 is a section on the line 24–24 of FIG. 23.

FIG. 25 is a blank development of a further modified form of the pouch pack container of the present invention.

FIG. 26 is a perspective view of the side of the blank of FIG. 25 set up in tubular form.

FIG. 27 is a fragmentary vertical sectional view of the container portion shown in FIG. 26 with the bottom closure flaps extending from the rear wall of the container in set-up position, that is, at an incline extending downwardly from the rear to the front wall of the container.

FIG. 28 is a view progressive to that of FIG. 27, with the flaps extending from the end walls folded inwardly against the end walls and into interlocking engagement with the panel extending from the rear wall.

FIG. 29 is a view progressive to that of FIG. 28 showing removal of a panel from the front wall and outwardly inclined therefrom a lip flap adapted to close the resulting opening.

FIG. 30 is a perspective view of the bottom of the container shown in FIG. 29.

FIG. 31 is a fragmentary section on the line 31–31 of FIG. 30.

Referring to the drawings, and particularly FIGS. 1 to 8, reference numerals 10–10 indicate a pair of opposed end walls, a front wall 11, a rear wall 12 and a narrow flap 13 which is adapted to be adhesively united to the outermost end flap 10 so as to form a carton of rectangular transverse section, the front wall being hinged to one end wall 10 on the hinge line 14. The other end wall 10 is hinged to the front wall on the hinge line 15 and to the rear wall on the hinge line 16. The securing or sealing flap 13 is hinged to the wall 12 on the hinge line 17.

Hinged to the end walls 10–10 are the end wall flaps 18–18 in hinged engagement on the hinge lines 19–19. These end wall flaps 18–18 are each further provided with a slot 20 and a tab 21 adjacent one end of the slot, the tab remaining in hinged engagement at the hinge line 22.

Secured to the lower edge of the front wall 11 is a bottom closure flap composed of the sections 23 and 24, the section 23 being hinged to the wall 11 on hinge line 25 and hinged to the panel section 24 on the hinge line 26.

Secured to the bottom edge of the back wall 12 on the hinge line 27 is the bottom closure panel composed of the sections 28 and 29 hinged together on the line 30. Extending laterally

from the panel section 29 are the tabs 31–31 receivable in the slots 20 for interlocking engagement therewith. Likewise, the hinged flap sections 23 and 24 at the bottom of front wall 11 have mutually laterally extending tabs 32–32 adapted to be received in the slots 20.

The front wall 10 has a lip flap 33 and end tabs 34–34 extending into end walls 10–10 defined by the perforated break line 35 and the hinge line 36, the end tabs 34, 34 terminating in the hook portions 37 to limit tilting movement of the lip flap 33 on the hinge line 36 as is best shown in FIG. 7.

In setting up the blank of FIG. 1, the initial step is to adhesively unite the narrow sealing flap 13 to the opposed free edge of end wall 10 so as to produce a tubular body which can be set up in rectangular cross section as shown in FIG. 2. Thereafter, the end wall flaps 18, 18 are return-bent on their hinge lines 19 against the inner faces of the end walls 10, 10 as shown in FIG. 3, following which the back wall bottom closure flap sections are inturned as shown in FIG. 4, in the direction of the arrow, with the portion 28 return-bent against back wall 12 and the portion 29 flexed at a downward incline on its hinge line 30 so as to bring the locking tabs 31 within slots 20. Thereafter, the front wall bottom closure tab is bent inwardly in the direction of the arrow shown in FIG. 5 by first flexing it on its hinge lines 25 and 26, flexing at the latter hinge line being for the purpose of enabling the sections 23, 24 to be inserted within the bottom opening since they are desirably of greater joint length than the distance between the walls 11 and 12. On further movement of the sections 23, 24, the section 24 can be made parallel with the section 23 and their joint tabs 32 also inserted within the slots 20 as shown in FIG. 6 to provide a firm inclined bottom sloping from the back wall downward to the bottom of the front wall.

The container as a whole can then, or prior to the closing of the bottom flaps, be packed with the materials to be disposed therein until ready for dispensing use. At such time the perforated lines 35 in the front wall 11 and side walls 10, 10 are broken to form the hinged lip. The breaking of notched line 35, particularly at the wings 34 and their portions 37 is aided by reason of the hinged tab 21 lying between the portions 37 so that less resistance to breaking the notched lines at the portions 37 is offered.

Thereafter, the lip portion 33 can be hinged outwardly to the limit of the hook portions 37 which anchor against the hinge lines 14 and 15 of the front wall 11 by reason of the shape of the perforated line 25. Thus, as will be noted in FIG. 1, the perforated line 35 defining the upper edge of hinge tab 33 is inclined at its side ends towards the wings 34 leaving an area on the front wall 11 adjacent to the hinge lines 14 and 15 where the hooks 37 can abut.

As will be further noted from FIG. 7, the retention of the inclined bottom is aided by inward projection of the tabs 21, 21 carried by the flaps 18, 18.

Thus, the outward extension of the hinged flap or lip 33 to the limit of the hooks 37 as shown in FIGS. 6 and 7 provides a hand access area or pouch whereby articles on the inclined bottom 29 can be readily withdrawn. Moreover, when it is desired the hinged flap 33 can be returned to substantial vertical position to close the container.

Referring now to the form of FIGS. 9 to 17, the blank shown in FIG. 9 similarly is composed of the front wall 11, rear wall 12, the side walls 10, 10 and connecting flap 13. Bottom flaps 18, 18 extend from the end walls 10, 10 and are adapted to be inwardly return-bent as in FIG. 11. These flaps 18, 18 are similarly formed with tabs 21 retained by hinge lines 21 as in the previous form and to the same end.

In this form there is also provided the lip flap 33 principally in the front wall 11 but extending on with the wings 34, 34 into the side walls 10, 10 and likewise terminating in the hook end portions 37, 37, the whole adapted to remain hinged on the line 36 in the front wall 10. A finger tab 40 may be provided in the lip 33 hinged on the line 41 for ease in manipulation of this lip flap 33, and the same may be provided in the form of FIGS. 1 to 8, and the succeeding forms, although not shown.

The flaps 18, 18 in the form of FIGS. 9 to 17 are each provided with a locking tab 42 which remains hinged on the line 43 but is otherwise separable from the end wall flaps 18. These locking tabs 42 have an added tongue component extending into and cut out from the end walls 10 as at 44. These tongue are adapted to be received in the slots 45, 45 formed in the bottom closure flap portion 46 extending from the front wall 11 and hinged thereto on the line 47. This bottom flap 46 has a terminal component 48 hinged thereto on the line 49.

The back wall 12 has hinged thereto on the line 50 a two-component bottom wall flap section composed of the parts 51 and 52 hinged together on the line 53.

Thus, as shown in FIG. 12, the flap sections 51 and 52 are then disposed between the walls of the carton and the section 51 placed in plane parallel relationship against the inner face of the back wall 12 and the section 52 inclined thereto on the hinge line 53 and in upward abutment against the tabs 21. Thereafter, the tab components 46, 48 extending from the front wall 11 are bent inwardly by first hinging on the line 49 and then straightened out so that the two components are parallel and nest against the inclined tab section 52 as shown in FIG. 13.

However, before the tab sections 46 and 48 are folded inwardly, the locking components 42, 42 are bent on their hinge line 43 so as to extend substantially normal to the flaps 18. Then when the flaps 46, 48 are bent over the flap section 52 the tongues 44 are extended through the slots 45 for interlocking engagement to hold the now doubled inclined bottom in firm set-up relationship.

The lip flat 31 is thereafter severed on its score lines so that it will hinge outwardly on the hinge line 36 with the hooks 37, 37 disposed inwardly and providing abutment for limiting outward movement of the lip flap 33 as previously explained with respect to the form of FIGS. 1 to 8.

Referring now to the form of FIGS. 18 to 24, the blank development shown in FIG. 18, similar to the previously described forms, comprises the side walls 10, 10, the back 12, front 11 and the narrow flap 13 which is adhesively secured to the front wall 11 so as to form a tubular container which when squared up is rectangular in transverse section as shown in FIG. 19. The lower ends of the side walls 10, 10 each likewise have bottom flaps 18 hinged on the lines 19, and bottom flaps 18 are adapted to be return-bent on the hinge line 19 at least in part against the walls 10, 10. These flaps 18, 18 are further divided on the hinge line 56 to define outer flap portions 55 and cut on the intermediate line to define a projectible tongue 57 for locking purposes as will be hereinafter described.

The front wall 11 has a knock-out panel 58 which can be separated therefrom on the line 59 for access purposes, the remaining opening being adapted to be covered by the lip flap 60. This lip flap 60 is hinged on the line 61 to the bottom closure panel portion 62 which in turn is hinged on the line 63 to the panel portion 64 which is hinged on the line 27 to back or rear wall 12.

Projecting laterally from the panel portion 63 are tabs 65, 65 which are hinged to the panel 62 at the portions 66, 66 and intermediately severed on the line 67 so that when the tabs 65, 65 are bent to extend normally to the flap portion 62 a narrow slot will be left by the line of severance 67, of the depth of the projection of tab 65 into a flap 62, for interlocking reception of the tongue 57 in the slot between portions 62 and 65.

Projecting laterally from the lip flap 60 are the outwardly disposed end tabs 68, 68 terminating in the hooked ends 69.

Thus, in setting up this form of my pouch pack, after the walls have been secured in tubular form as shown in FIG. 19, the rear wall extension 64 is folded on the hinge line 27 against the inner face of wall 12 and the bottom closure panel portion 62 inclined to the portion 64 on the hinge line 63 at a downward incline from the rear wall to the front wall 11 and its lateral projections 65 bent normally thereto and downwardly. At this point, the end wall flaps 18, 18 are bent inwardly on their hinge lines 19 to overlie the lateral projections 65 of the bottom flap 62 and the tongue 57 are inserted

in the slot defined and resulting from the slit line 67 in panel 62 to form an interlock, the portions 55 being then folded in a plane parallel relationship with the inclined bottom 62.

The lateral projections 68 of lip flap 60 with their end hooks 69 are then overlaid on walls 10 and extended into the curved slits 70 in the end walls 10 so that the lip flap 60 can pivot on its hinge line 61 against the front wall 11 to the limit of the hooks 69 and the upper limit of the slits 70.

In operative use the panel 58 in the front wall 11 is removed on the score line 59 so as to provide an access opening to the interior of the container where the contents thereof fall forwardly on the inclined bottom section 62 towards the lip flap 60 in a manner and for the purposes previously described.

The form of FIGS. 25 to 31 is quite similar to that of the form of FIGS. 18 to 24 with the exception that no slot 70 is provided in the end walls 10, 10. In lieu thereof the knock-out front wall panel 71 extends to the full width of the front wall 11 rather than the lesser width knock-out panel 58 of the previous form. In this case, the hook tabs 69 and the wings 68 ride inwardly of the end walls 10, rather than outwardly as in the form of FIGS. 18 to 24, with limiting movement of the hooks 69 being against the front wall 11 adjacent the side defining edges thereof.

I claim:

1. A collapsible container comprising a unitary blank cut and scored to define a pair of opposed end walls, a rear wall, a front wall, and a narrow flap hinged to one of said end walls and securable to said rear wall to form a tube, bottom end wall flaps adapted to be folded inwardly and against the end walls, a bottom closure flap extending from at least one of said front and back walls adapted to be folded inwardly and to extend at a downward incline from said rear wall to said front wall, interengageable means formed on and adapted to extend between said end wall flaps and said inclined bottom flap to retain the latter in inclined position, and a lip flat hinged adjacent the bottom of said front wall adapted to be inclined outwardly therefrom, said lip flap including integral side wings adapted to be disposed normal thereto and to project within said container and terminating in anchor means for limiting outward incline of said flap to define a hand-entrance mouth whereby to permit access to articles in the set-up container resting on the inclined bottom thereof.

2. The collapsible container of claim 1 wherein the bottom closure comprises a back bottom closure flap formed with a intermediate hinge line dividing it into a rear panel adapted to be folded against said back wall and a forward panel adapted to extend at an incline from said hinge line to adjacent the bottom edge of said front wall, said forward panel including laterally extending tabs adapted to be interlockingly received in inclined slots formed in said end wall flaps, and a front bottom closure flap adapted to lie at an incline to the front wall and against said first inclined bottom panel, and lateral tabs extending from said bottom front wall closure flap adapted to be interlockingly received in said end wall flap slots.

3. The collapsible container of claim 1 wherein the bottom closure flap comprises a back bottom closure flap formed with an intermediate hinge line dividing it into a rear panel adapted to be folded against said back wall and a forward panel adapted to extend at an incline from said hinge line to adjacent the bottom edge of said front wall, said end wall flaps including tabs hinged at an incline and adapted to be disposed normal thereto when said end wall tabs are folded inwardly and terminating in tongues, and a front bottom closure flap formed with apertures for receiving said tongues and adapted to lie at an incline to the front wall and against the inclined forward panel extending from said rear wall.

4. The collapsible container of claim 1 wherein the bottom closure flap comprises a three panel flap hinged to and extending from said back wall, the first of said panels being adapted to be folded inwardly and against said rear wall, the second of said panels being adapted to extend at a downward incline from said rear wall to said front wall, tab and slot interengageable means formed on and adapted to extend between said end wall flaps and said inclined bottom flap to retain the latter in inclined position, and the third panel constituting said lip flap.

5. The collapsible container of claim 4 wherein the side wings of said lip flap are adapted to be projected within said container adjacent the side walls thereof and with its terminal anchor means adapted to abut against said front wall.

6. The collapsible container of claim 4 wherein the side wings of said lip flap are adapted to lie outwardly of and to project within slits formed in the end walls, the terminal anchor means on said wings being adapted to abut against the upper defining end portions of said slits.

7. The collapsible container of claim 4 wherein the front wall comprises a separable panel adjacent the bottom thereof adapted to define a front opening beneath said lip flap.