July 18, 1950 M. I. WILLIAMSON 2,516,085

CONTAINER

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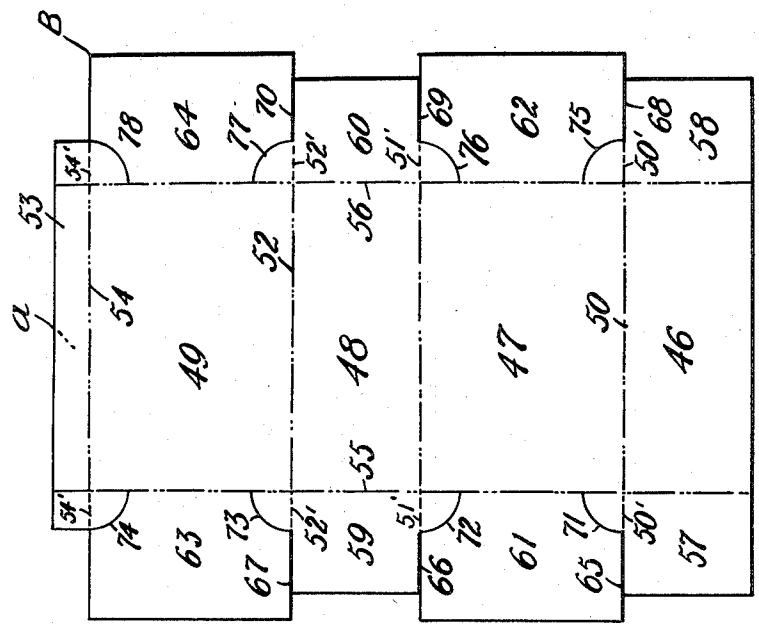


Fig. 8

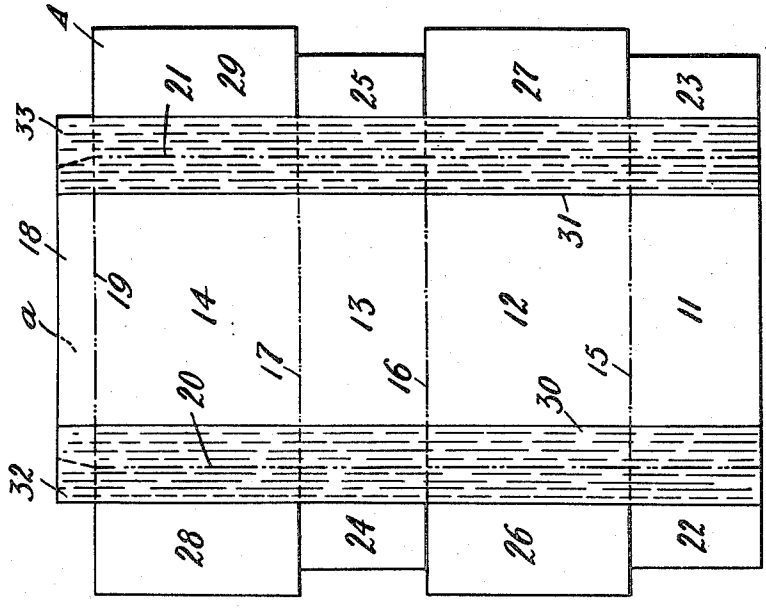


Fig. 1

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CONTAINER

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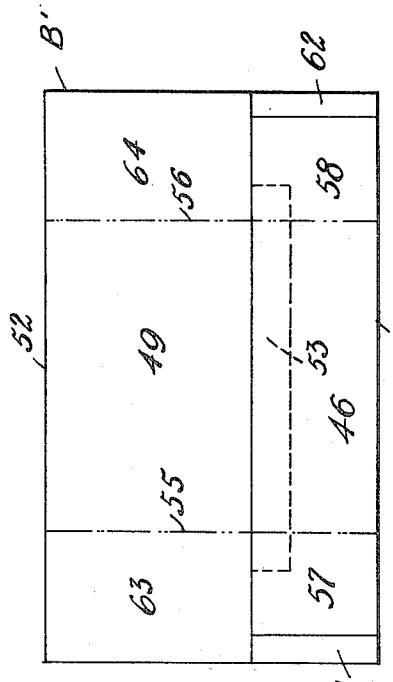


Fig. 9

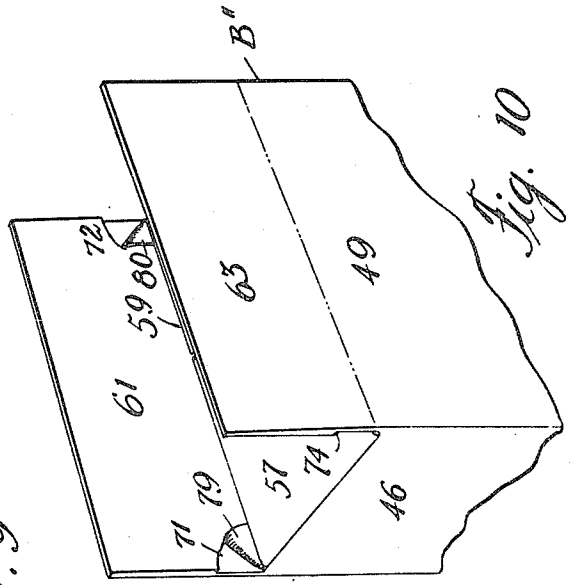


Fig. 10

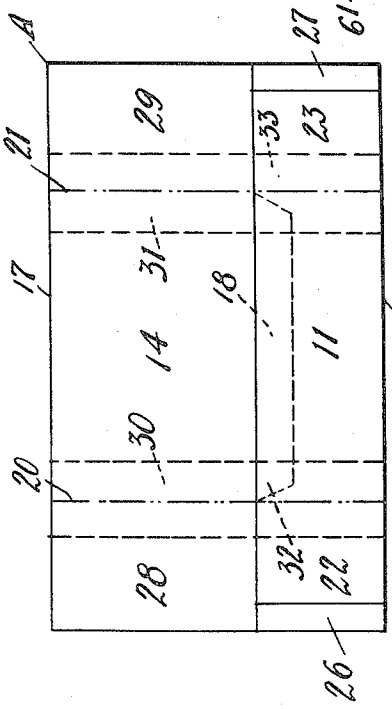


Fig. 2

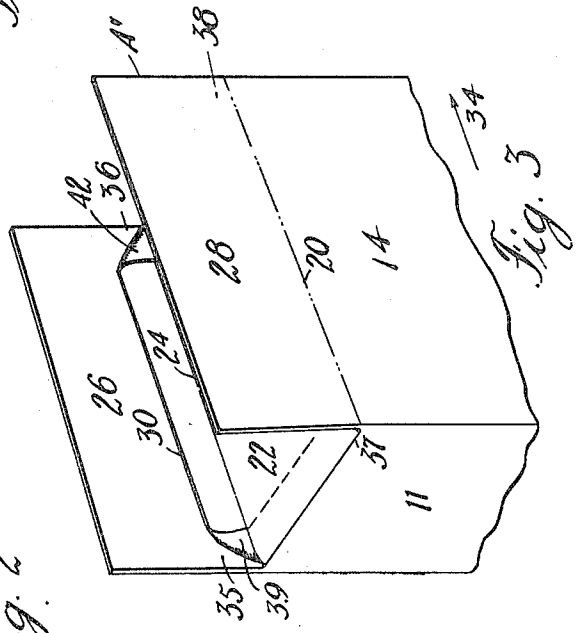


Fig. 3

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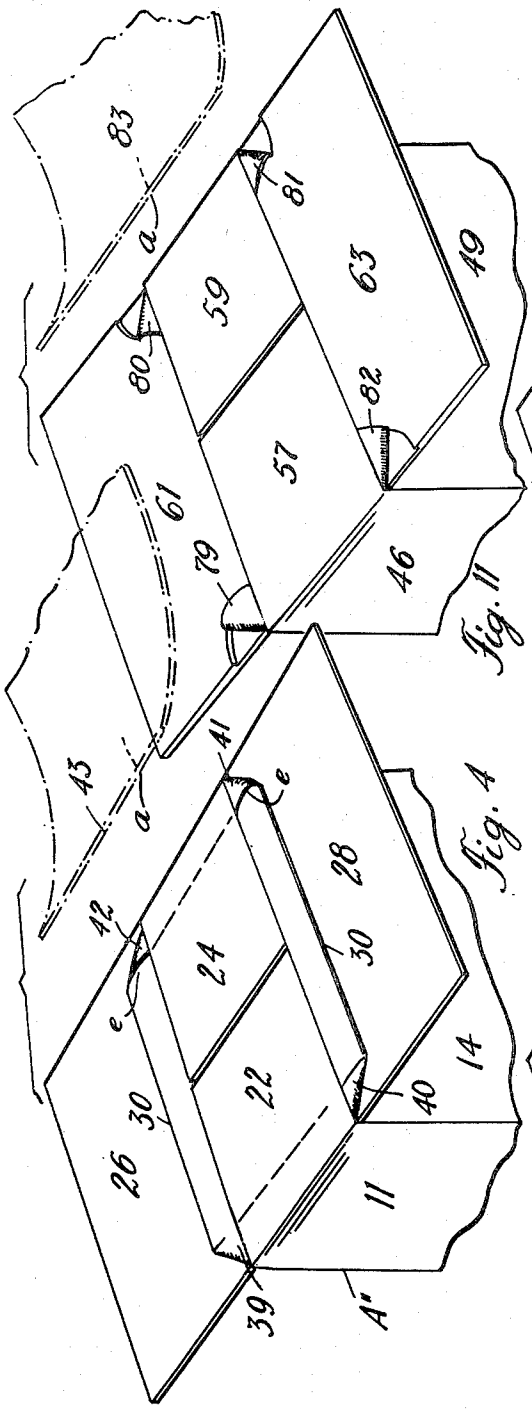


Fig. 4

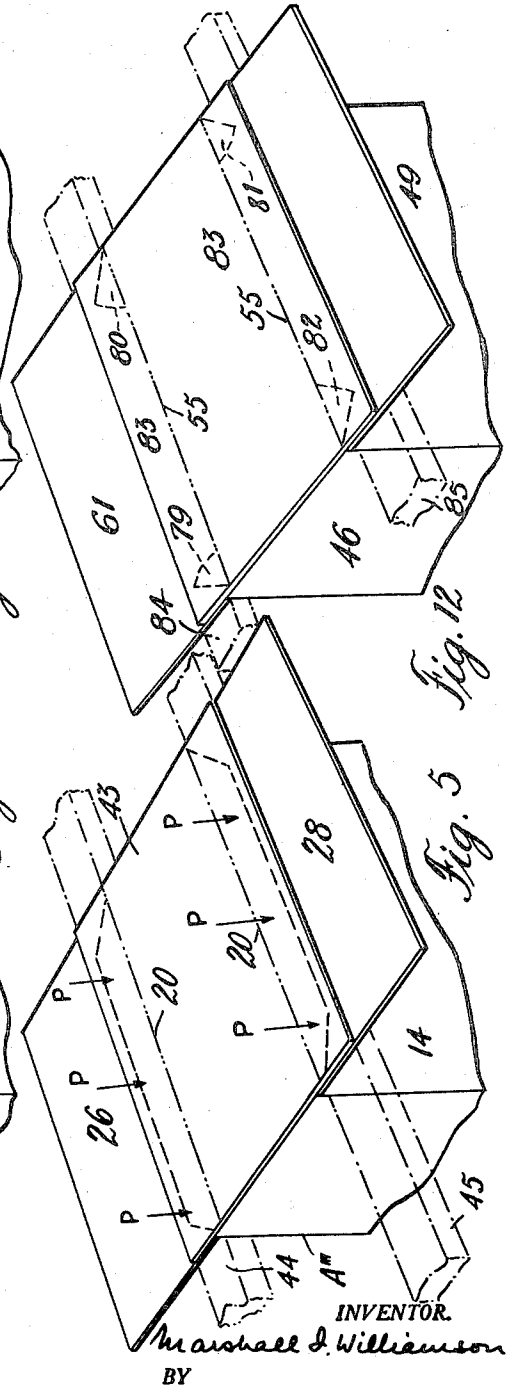


Fig. 11

Fig. 12

Fig. 5

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CONTAINER

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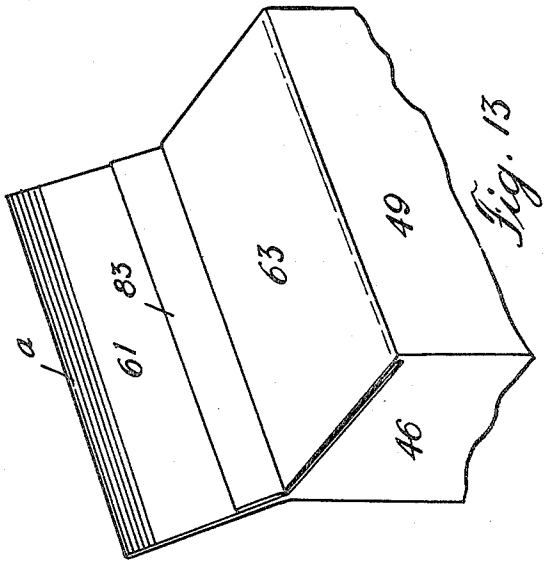


Fig. 13

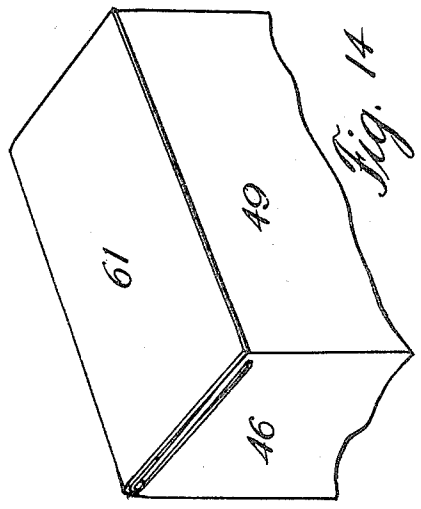


Fig. 14

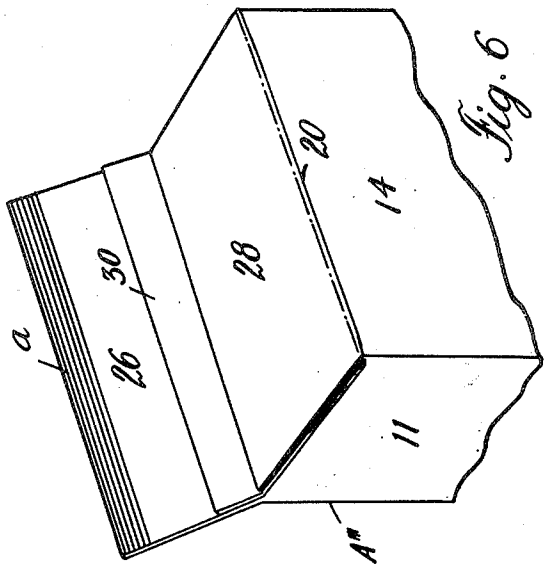


Fig. 6

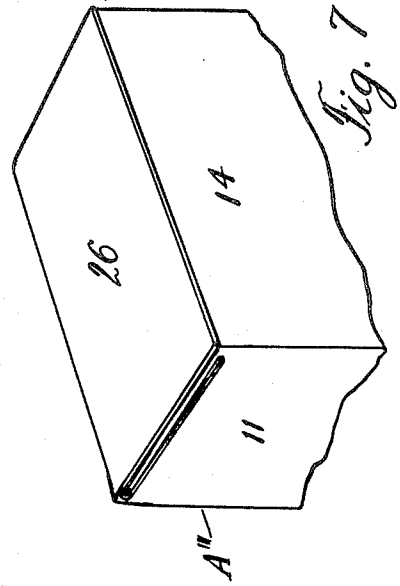


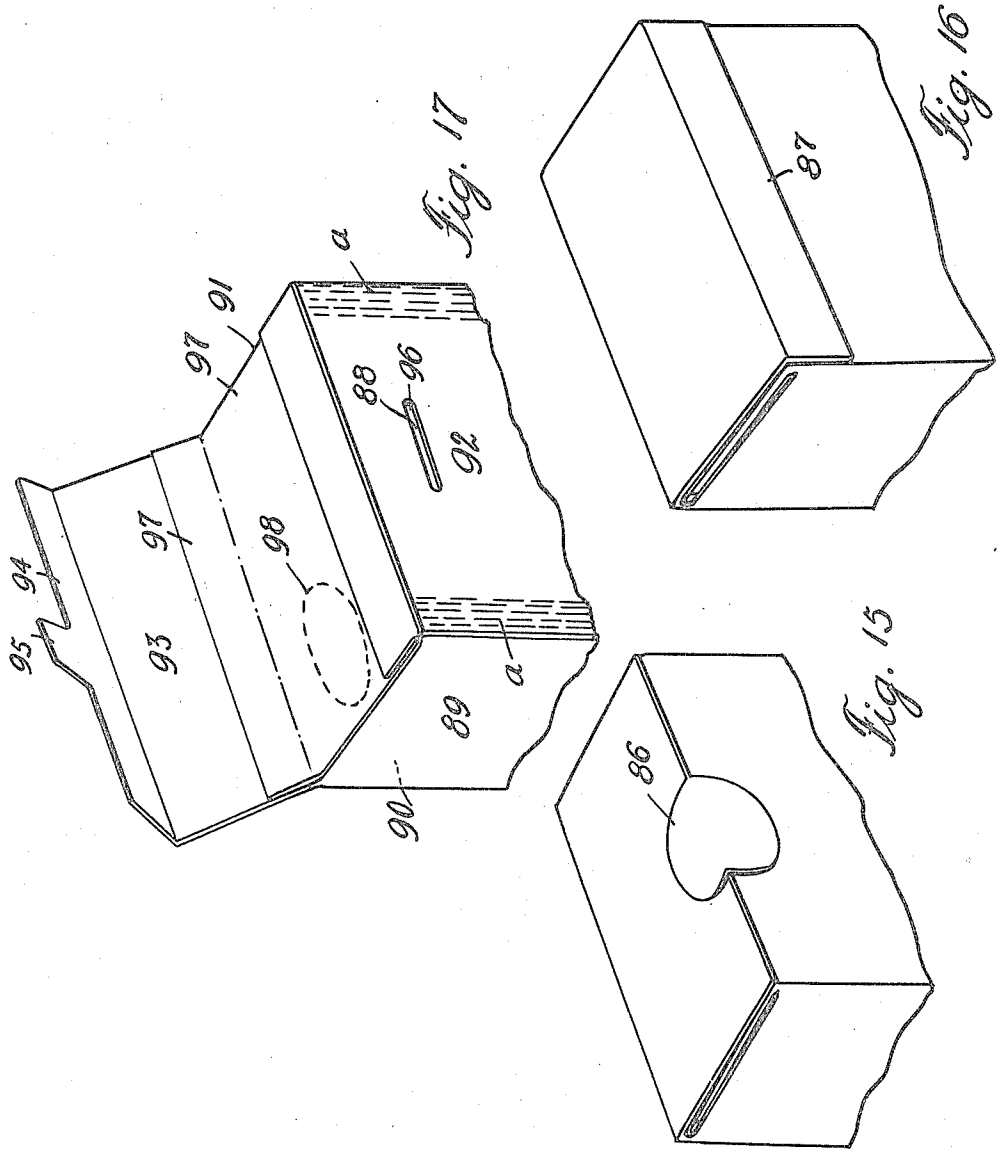
Fig. 7

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CONTAINER

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Patented July 18, 1950 2,516,085

UNITED STATES PATENT OFFICE

2,516,085

CONTAINER

Marshall I. Williamson, New Haven, Conn., assignor, by mesne assignments, to National Folding Box Company, Incorporated, a corporation of Connecticut

Application February 14, 1945, Serial No. 577,772

8 Claims. (Cl. 229—37)

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This invention relates to the production of containers made from cardboard, paperboard, or other suitable foldable sheet material and has particular reference to the manufacture of containers for the packaging of granular, powdered, or fluid material which has a tendency to sift or leak through minute holdes or cracks in the container.

Cartons and containers of conventional construction are not entirely satisfactory for the packaging of granular, powdered or fluid material for the reason that the contents will sift or leak out of the package, particularly during transport or handling when the package is subjected to vibration or slight deformation as is unavoidable in the crating or stacking of large numbers of filled containers.

Containers which are not entirely leak- or sift-proof have the further disadvantage of permitting air, vapor or moisture to enter leading to deterioration or spoiling of the contents.

This invention provides a leak- and sift-proof container and a method of making and sealing it. The container may be prepared and shipped from the plant of a carton manufacturer in the form of a flat tubular collapsed blank, requiring a minimum of shipping space and may be set up, filled, and closed by a product manufacturer or packer on simple automatic machinery, operating at high speeds insuring efficient and economic production and filling of the carton.

In accordance with the invention, a carton blank having end flaps for closing the carton is prepared to form corner sealing webs between adjacent end flaps. Corner sealing webs as such are known and may be formed either by a liner or a strip of material extending beyond the score lines of the end flaps over a marginal portion of the end flaps adjacent the score line. Corner sealing webs may be formed from the material of the carton blank itself which is cut-scored and so prepared as to cause a web to peel from the carton blank at each carton corner when the end flaps adjacent such corners are folded in carton closing position.

Conventional sealing webs, although effective to seal a carton at the very corner, are not effective to prevent loss of contents through cracks and apertures which are beyond the area of the corner webs.

According to the invention, a completely sealed and tight sift-proof container may be formed in the following manner.

Two end flaps hinged to opposite side walls are first infolded to whereby corner webs are formed.

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The remaining two end flaps are then outfolded. A sealing membrane is then placed over the folded flaps, the membrane adhering to the outside surface of the infolded flaps, to the corner webs and to the inside surface of the outfolded flaps.

After securing of the membrane to the carton end flaps and the corner webs, the carton end is tightly sealed against sifting and leakage from the interior as well as against entry of air, vapor or moisture into the carton from the outside.

The various features, objects, and advantages of the invention as well as the structural details of preferred forms of cartons and the steps of my method will appear more fully from the detailed description which follows, accompanied by drawings showing, for the purpose of illustration, preferred embodiments of the invention.

The invention also consists of certain new and original features of construction and combination of parts hereinafter set forth and claimed.

Although the characteristic features of the invention which are believed to be novel will be particularly pointed out in the claims appended hereto, the invention itself, its objects and advantages and the manner in which it may be carried out may be better understood by referring to the following description taken in connection with the accompanying drawings forming a part of the description, in which—

Fig. 1 is a plan view of a prepared blank from which my improved container may be formed, the inside surface of the blank facing the observer and having attached to it strips of material for forming corner webs;

Fig. 2 is a plan view of a collapsed tubular blank made from the blank shown in Fig. 1 by folding and sealing operations;

Fig. 3 is a perspective view of the end of a carton formed from the expanded blank of Fig. 2 after a first infolding operation by which corner webs are formed;

Fig. 4 is a perspective view of the carton end after a further folding operation immediately prior to the application of a sealing membrane.

Fig. 5 is a perspective view of the carton of Fig. 4 after securing of a sealing membrane to the carton end, the carton end being now completely sealed;

Fig. 6 is a perspective view of the carton end after a further folding operation;

Fig. 7 is a perspective view of the carton end after a final folding and securing operation;

Fig. 8 is a plan view of the inside surface of a blank, from which my improved container may

be formed, the blank being prepared to form corner webs from material peeled from the carton blank;

Fig. 9 is a plan view of a collapsed tubular blank made from the blank shown in Fig. 8 by a first folding and sealing operation.

Fig. 10 is a perspective view of the end of a carton formed from the expanded blank of Fig. 9, the carton end being shown after a first infolding operation of end flaps by which corner webs are formed.

Fig. 11 is a perspective view of the carton end after a further folding operation and immediately prior to the application thereto of a sealing membrane;

Fig. 12 is a perspective view of the carton end of Fig. 11 after securing thereto of a sealing membrane, the carton end being now completely sealed.

Fig. 13 shows the carton end after a further folding operation;

Fig. 14 is a perspective view of the carton after a final folding and securing operation;

Figs. 15 and 16 show alternative ways of securing the carton top panel in position; and,

Fig. 17 shows a carton embodying the invention, made from a five panel blank and provided with a dispensing aperture and a reclosable top.

In the following description and the claims, various details will be identified by specific names for convenience. These names, however, are intended to be as generic in their application as the art will permit. Like reference characters refer to like parts in the several figures of the drawing.

In the drawings accompanying, and forming part of the specification, certain specific disclosure of the invention is made for the purpose of explanation, but it is understood that details may be modified in various respects without departure from the broad aspects of the invention.

The blank A shown in Fig. 1 is substantially rectangular in outline resulting in a minimum waste of material. The blank may be cut and scored from a large sheet or roll of paperboard or other suitable foldable material on an automatic cutting and scoring machine. Only one side of the blank need be decoratively finished or imprinted, since only one surface of the blank is presented as the outside face of the assembled container. In Fig. 1 the blank is shown in a position in which the inside surface faces the observer.

The blank comprises four side wall panels, 11, 12, 13, and 14, hingedly connected along parallel side score lines 15, 16, and 17. A securing flap 18 is hingedly connected to the side wall panel 14 along a further side score line 19 parallel with the score lines 15, 16, and 17.

The ends of the side wall panels 11, 12, 13, and 14 are defined by parallel end score lines 20, and 21 which intersect the side score lines 15, 16, 17, and 19 at right angles. Substantially rectangular first end flaps 22, 23, 24, and 25 are hingedly connected to the ends of alternate side wall panels 11 and 13 along the end score lines 20 and 21, respectively. Second end flaps 26, 27, 28, and 29 are hingedly connected to the remaining end panels 12 and 14 along end score lines 20 and 21, respectively. The length of the first end flaps 22, 23, 24, and 25 is preferably equal to approximately one half the width of the wider side panels 12 and 14, so that their outer edges will abut when the flaps are infolded into carton closing position.

Two strips 30 and 31 of relatively tough, tear-resistant material, such as kraft paper, are adhesively secured to the inside surface of the blank A over the end score lines 20 and 21. The strips 30 and 31 overlap a marginal portion of the end flaps adjacent the end score lines 20 and 21 and are lightly glued to the end flaps so that during the folding operation of the blank the strips will be peeled off from the end flaps in certain places without damage to the strips.

The blank A may be pre-formed at the plant of a blank manufacturer into flat tubular form ready for expansion into carton shape. For this purpose adhesive *a* is first applied to the outside surface of the tube-securing flap 18 and to the protruding portions 32 and 33 of the strips 30 and 31. The blank is then folded about the score line 17 to bring the inside surface of the side wall panel 14 face to face with the inside surface of the side wall panel 13. Thereafter, or substantially simultaneously, the blank is folded about the score line 15 to bring the inside surface of the side wall panel 11 face to face with the inside surface of the side wall panel 12. The folding operations bring the terminal portion of the side wall panel 11 and of the strips 30 and 31 into adhesive engagement with the securing flap 18 and terminal portions 32 and 33 of the strips. The result is a tubular collapsed flat blank A' shown in Fig. 2.

The blanks A' may be stacked and stored in collapsed flat condition requiring a minimum of space. They may be shipped in collapsed condition to the product manufacturer or packer where the blanks are expanded into hollow carton form by conventional equipment ready for filling and sealing.

As cartons are needed for filling, blanks A' are expanded into hollow carton form. The cartons are then closed at one end, then inverted, filled, and closed at the other end, whereafter the cartons are ready for shipment. Inasmuch as the end structures forming the carton bottom and top are identical, it will only be necessary to describe in detail the forming of one end closure, it being understood that the other end of the carton is closed in the same manner.

Fig. 3 shows an expanded carton blank A'', after an initial folding operation. The illustrated carton end may, as hereinbefore indicated, represent the bottom structure of a hollow expanded blank to be filled after completion of the closure, or it may represent the top structure of a carton filled with merchandise.

The folding operations are preferably performed by an automatic machine through which the carton travels in the direction of the arrow 34. During the advance of the blank A'' the end flaps 22 and 24 are first infolded into carton closing position. The infolding of the end flaps 22 and 24 causes the lining strip 30 to peel from corner areas 35, 36, 37, and 38, whereby sealing webs, gussets, or bellows folds 39, 40, 41, and 42 are formed which seal the pin holes which otherwise would exist at the four corners of the carton end.

During a further advance of the carton the end flaps 26 and 28 are outfolded into a position substantially coplanar with the infolded end flaps 22 and 24 as shown in Fig. 4. With the end flaps 26 and 28 outfolded, the carton moves toward a suitable device which applies a sheet or membrane 43 of suitable material to the end structure of the carton A''.

The sheet or membrane 43 may be of paper to which adhesive *a* has been applied to the underside. It may also be a strip of cellulose material provided with a coating of adhesive causing the sheet to adhere by mere application of pressure. The width of the sheet or membrane 43 is preferably somewhat greater than the space between the outer edges of the liner strips 30 overlying the end panels 26 and 28. Its length is prefrably equal to the width of the end panels 26 and 28 so as to extend from one end of the carton bottom or top to the other.

Fig. 5 shows the sealed carton A''' with the membrane 43 in place. During the sealing operation the outfolded carton flaps 26 and 28 travel over rails 44 and 45 which relieve the carton walls of the sealing pressure P exerted on the marginal portion of the membrane 43. Considerable force may thus be exerted on the marginal portion of the membrane including the webs, insuring a positive, tight seal of the carton at the critical areas.

The sealing membrane overlies, and is adhesively secured to, the outside surface of the infolded end flaps 22 and 24, to the portion of the strip overlying the end panels 26 and 28, to the gusset folds or webs 39, 40, 41, and 42 and to a portion of the inside surface of the end flaps 26 and 28 adjacent the outer edges of the strip 30.

It is apparent from a mere inspection of the drawing that the carton end is tightly sealed against sifting or leakage from the carton, as well as entry of air, vapor or moisture into the carton. Any sifting or leakage which could have occurred if the carton A'' shown in Fig. 4 had been provided only with corner webs is prevented by the membrane preventing material from escaping through the inner open ends *e* of the webs or gusset folds and between the abutting edges of the flaps 22 and 24. Any sifting or leakage which might occur at the four corners of the carton provided only with a sealing membrane 43 is prevented by the corner webs 39, 40, 41, and 42 which seal the pinholes.

The carton A''' sealed as shown in Fig. 5 is now ready for securing of the end flaps. During the advance of the carton through the sealing machine the end flap 28 is first infolded about the score line 20 to overlie the sealing membrane 43 as shown in Fig. 6. Thereafter, or substantially simultaneously, the remaining end flap 26 is folded over the end flap 28 adhesive having first been applied to the inside surface of the end flap 26 as indicated at *a*.

The carton A''' is now ready for shipment and storage and will effectively protect the carton contents against moisture, air or vapor from the outside and prevent sifting or leaking of the contents of the carton.

My novel sift and leak-proof container may also be made from a blank without the aid of attached liner strips or a separate inner liner sheet. Such a blank B, to be made into a sift proof carton, is shown in Fig. 8. It consists of a substantially rectangular piece of material, preferably laminated paperboard, consisting of relatively low grade board with a sheet of high-grade, tear-resistant material laminated to the entire inside surface. A decorative ply suitable for printing may also be provided on the outside of the blank although strength of the outside lamination is of secondary importance to appearance. The resultant board has the property of peeling readily at portions which are suitably prepared by cut scoring, that is by a cut partway through the material so that the tear-resistant lamination is not severed where the material is intended to peel.

The blank comprises side wall panels 46, 47, 48, and 49, hingedly connected along side score lines 50, 51 and 52. A securing flap 53 is hingedly connected to the side wall panel 49 along a further side score line 54, parallel with the score lines 50, 51 and 52.

The ends of the side wall panels 46, 47, 48 and 49 are defined by parallel end score lines 55 and 56 which intersect the side score lines 50, 51, 52 and 54 at right angles.

Substantially rectangular first end flaps 57, 58, 59 and 60 are hingedly connected to the ends of alternate side wall panels 46 and 48. Second end flaps 61, 62, 63 and 64 are hingedly connected to the remaining end panels 47 and 49 along the score lines 55 and 56, respectively. The length of the first end flaps 57, 58, 59 and 60 is preferably equal to approximately one half of the width of the wider side panels 12 and 14, so that their outer edges will abut when the flaps are infolded in carton closing position.

The end flaps of each carton end are separated by cut lines 65, 66 and 67 and cut lines 68, 69 and 70, respectively. These cut lines are extensions of the respective side score lines 50, 51 and 52, and terminate short of the end score lines 55 and 56 and continue as outer cut-score lines 50', 51', 52' and 54', to either side of the end score lines 55 and 56. Arcuate inner cut-score lines 71, 72, 73 and 74, 75, 76, 77 and 78 may in addition be provided about the intersections of the end score lines 55 and 56 with the side score lines 50, 51, 52 and 54.

The inner arcuate cut scores, severing the tear-resistant inner lamination of the board, serve to facilitate even and uniformly symmetrical peeling at the respective areas along the cut scored lines upon folding of the end flaps to form webs of predetermined thickness as will presently appear from a consideration of the steps further below described for completing the blank into carton form.

The ends of the securing flap 53 extend to the ends of the cut score lines 50', 51', 52, and 54', respectively, to initiate the desired peeling of the cut scored portions when the securing flap 53 is folded in respect to the end flaps 63 and 64.

The blank B is preformable into flat tubular form by folding about score lines 50 and 52, adhesive having previously been applied to the outside surface of the securing flap 53. The folding operations bring the terminal portion of the side wall panel 46 and portions of the attached end flaps 57 and 58 into adhesive engagement with the securing flap 53 and its extensions. The result is a tubular collapsed flat blank B' shown in Fig. 9.

The completion of the carton blank B' into final carton form proceeds, in substance, like the assembly and completion of the blank A' hereinbefore described.

Fig. 10 shows the carton blank B'' in expanded condition after an initial folding operation which may, as hereinbefore described in connection with blank A'', be preformed on an automatic folding machine. The infolding of the end flaps 57 and 59 with respect to the upstanding end panels 61 and 63 causes the cut scored material to peel, forming gussets or corner webs 79, 80, 81 and 82.

During the further advance of the carton

through the sealing machine the end flaps 61 and 63 are outfolded into a position substantially coplanar with the infolded end flaps 57 and 59, as shown in Fig. 11. A sheet or membrane 83 of suitable material is then adhesively secured to the end structure of the carton to cover the outside surface of the infolded end flaps 57 and 59, the corner sealing webs 79, 80, 81 and 82 and the marginal portion of the end flaps 61 and 63 adjacent the infolded end flaps 57 and 59. The membrane 83 is provided with adhesive on its underside and is pressed into sealing engagement with the outfolded end flaps 61 and 63 supported by pressure relieving rails 84 and 85 over which the flaps pass, as is shown in Fig. 12.

The carton end is now tightly sealed and ready for the final folding and securing of the end flaps 61 and 63. The end flap 63 is first infolded about the score line 55 to overlie the sealing sheet or membrane 83 as is shown in Fig. 13. Thereafter the end flap 61 is folded over the infolded end flap 63 and is secured in place by suitable means, such as a strip of adhesive *a* applied to the underside of the end flap 61.

Alternative means for maintaining the end panels of the carton in folded position are shown in Figs. 15 and 16. Adhesive A on the top end flap may be omitted and the end flap be held by a decorative seal 86 placed over the edge of the end flap as shown in Fig. 15. Also the top end flap may be provided with a sealing tab 87 overlying the front panel of the carton. Evidently there are many other possibilities of maintaining the end flaps in downfolded position as will readily occur to persons skilled in the art.

This invention lends itself particularly well to the making of dispensing containers which after the initial opening are to be reclosed. A reclosable container is shown in Fig. 17. It is made from a blank having five side wall panels 88, 89, 90, 91 and 92. The side wall panel 92 is an additional panel which overlies the side wall panel 88 and is secured thereto by marginal glue strips *a*. A top panel 93 is hingedly secured to the rear wall panel 90 and has a tuck flap 94 hingedly secured thereto. The tuck flap is provided with a tongue 95 fitting into a slot 96, in the additional front panel 92, which is not glued to the underlying panel 88 in the neighborhood of the slot and thus forms a convenient pocket into which the tongue 95 may be inserted. The membrane 97 may be provided with a line 98 defining a dispensing aperture lying therebeneath.

The carton is opened by lifting up the top panel and cutting out or otherwise removing the portion of the membrane covering the dispensing aperture. Thereafter the carton may be reclosed by inserting the tongue 95 of the tuck flap 94 into the slot 96.

Thus an attractive container is provided which is absolutely sift- and leak-proof, yet extremely simple of construction. The novel container may be made, filled, and sealed on automatic machinery, conventional automatic box machines being easily adaptable for the manufacture and sealing of the new carton. A particularly advantageous feature in this connection is the fact that the carton may be advanced continuously along a straight line track for performance of all the folding, closing and sealing operations.

Manifestly, the invention is not limited to the specific forms of cartons herein illustrated and described. Numerous modifications may be made without departure from the spirit and teachings of this invention. For example, a one-piece sheet

or liner may be employed covering the inside surface of the wall panels in place of the two strips on the blank shown in Fig. 1. The carton panels may be made of equal width so as to produce a carton of square cross section. The sealing membrane may be made of transparent or non-transparent material. It may be applied from rolls or sheets by automatic labeling machines. Various forms of dispensing apertures may be employed and other forms of reclosures be provided as will be quite apparent to persons skilled in the art.

The novel carton offers numerous advantages and features in addition to the feature of being sift- and leak-proof.

An important feature is that the carton may be set up from a ready prepared collapsed flat tubular blank, thus reducing the expense of shipping empty hollow containers. A further feature is that the carton, if provided with transparent sealing membrane covering a dispensing aperture as shown in Fig. 17, will permit visual inspection of its contents while the carton is still tightly sealed. The overlying cover protects the window effectively from damage during storage, transport and handling, but may readily be opened for display and reclosed without disturbing the tight seal of the carton.

A further feature of the carton is its manner of sealing. Considerable force may be exerted on the rail supported marginal portions of the sealing membrane, that is at the critical points, without danger of deformation of the carton itself and without exertion of the force against the carton walls.

This is a particular advantage in cartons where the membrane is attached by heat sealing as may be preferable for cartons containing fluid matter.

Obviously various changes, additions, omissions and modifications may be made in adapting the novel container to specific uses without departure from the principles of this invention.

What is claimed is:

1. A carton having end flaps hingedly connected to side walls of the carton along end score lines; a web forming member on the inside of the side walls extending beyond the end score lines over a marginal portion of the end flaps adjacent the hinge lines, said member forming sealing webs at the corners upon folding of the end flaps into carton closing position; and a membrane adhesively secured to the outside surface of opposed infolded end flaps, to said webs, and to the inside surface of the remaining end flaps, said membrane being larger than the end area of the carton to extend, in substantially flat condition, over the pair of infolded end flaps and over marginal portions of said remaining end flaps, which marginal portions include said folded webs, whereby the membrane may be sealed to said remaining flaps and said webs under pressure while said remaining flaps are being rigidly supported in outfolded condition against the sealing pressure.

2. A carton having end flaps hingedly connected to side walls of the carton along end score lines; a strip of material extending across the end score lines, the strip being adhesively attached to said side walls and forming bellows folds at the corners upon folding of the end flaps into carton closing position; and a membrane adhesively secured to the outside surface of opposed infolded end flaps, to said bellows folds, and to the inside surface of the remaining end flaps, said membrane being larger than the end area of the carton to extend, in substantially flat condition,

over the pair of infolded end flaps and over marginal portions of said remaining end flaps, which marginal portions include said folded webs, whereby the membrane may be sealed to said remaining flaps and said webs under pressure while said remaining flaps are being rigidly supported in outfolded condition against the sealing pressure.

3. A carton having end flaps hingedly connected to side walls of the carton along end score lines, the end flaps being separated by cut lines terminating short of said end score lines and by cut-score lines extending from the cut lines to the end score lines, the cut-score lines passing only part way through the carton material and leaving a layer of uncut material connecting the two end flaps meeting at the respective cut-score line, the uncut material being peelable from one of the end flaps and forming bellows folds at the corners upon folding of the end flaps into carton closing position; and a membrane adhesively secured to the outside surface of opposed infolded end flaps, to said bellows folds, and to the inside surface of the remaining end flaps, said membrane being large than the end area of the carton to extend, in substantially flat condition, over the pair of infolded end flaps and over marginal portions of said remaining end flaps, which marginal portions include said folded webs, whereby the membrane may be sealed to said remaining flaps and said webs under pressure while said remaining flaps are being rigidly supported in outfolded condition against the sealing pressure.

4. A carton having end flaps; means connecting adjacent end flaps to form corner sealing webs upon folding of said flaps into carton closing position; and a membrane adhesively secured to said end flaps and said folded webs, said membrane being larger than the end area of said carton to extend in substantially flat condition over certain of said flaps in infolded position and over marginal portions of other flaps in outfolded position, which marginal portions include said folded webs, whereby the membrane may be sealed to said other flaps and said webs under pressure while said other flaps are being rigidly suported in outfolded position against the sealing pressure.

5. A carton having end flaps arranged in pairs of opposed flaps; means forming corner sealing webs, said means consisting of material connecting two end flaps at a corner; and a membrane adhesively secured to the outside surface of one pair of flaps to the inside surface of the other pair of flaps, and to said folded webs, said membrane being larger than the end area of said carton to extend in substantially flat condition over said one pair of flaps in infolded position and over marginal portions of said other pair of flaps in outfolded position which marginal portions include said folded webs, whereby the membrane may be sealed to said other pair of flaps and to said webs under pressure while said remaining flaps are being rigidly supported in outfolded condition against the sealing pressure.

6. A carton having end flaps hingedly connected to side walls, the end flaps being connected at each carton corner by a web of uncut material peelable from one of the two end flaps at each corner, the uncut material forming bellows folds

at the corners upon folding of the end flaps into carton closing position; and a membrane adhesively secured to the outside surface of opposed infolded end flaps, to said bellows folds and to the inside surface of the remaining end flaps, said membrane being larger than the end area of said carton to extend in substantially flat condition over said infolded flaps and over marginal portions of said remaining end flaps in outfolded position, which marginal portions include said folded bellows folds, whereby the membrane may be sealed to said remaining flaps and to said webs under pressure while said remaining flaps are being rigidly supported in outfolded condition against the sealing pressure.

7. A carton having four side walls, a pair of first end flaps hingedly connected from opposite side walls and a pair of second end flaps hingedly connected to the remaining side walls, end flaps meeting at the carton corners being connected by webs of uncut material peelable from one of the two end flaps between which each web extends, the peeled webs forming bellows folds upon folding of a pair of end flaps into carton closing position; and a membrane adhesively secured to the outside surface of said first pair of end flaps, to said bellows folds and to the inside surface of said second pair of end flaps, said membrane being larger than the end area of said carton to extend in substantially flat condition over said infolded first pair of flaps and over marginal portions of said second pair of flaps in outfolded position, which marginal portions include said bellows folds, whereby the membrane may be sealed to said second flaps and to said webs under pressure while said second flaps are being rigidly supported in outfolded condition against the sealing pressure.

8. A dispensing carton having end flaps; means connecting adjacent end flaps to form corner sealing webs upon folding of said flaps into carton closing position; a membrane adhesively secured to said end flaps and said folded webs; and a line of weakness defining a dispensing aperture in said membrane, said membrane being larger than the end area of said carton to extend in substantially flat condition over certain of said flaps in infolded position and over marginal portions of other flaps in outfolded position, which marginal portions include said folded webs, whereby the membrane may be sealed to said other flap and to said webs under pressure while said other flaps are being rigidly supported in outfolded condition against the sealing pressure.

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