

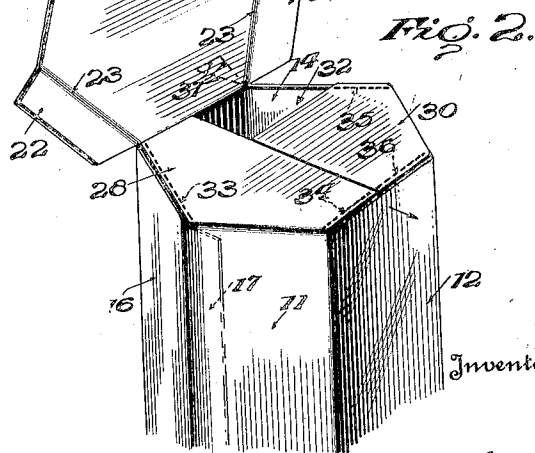
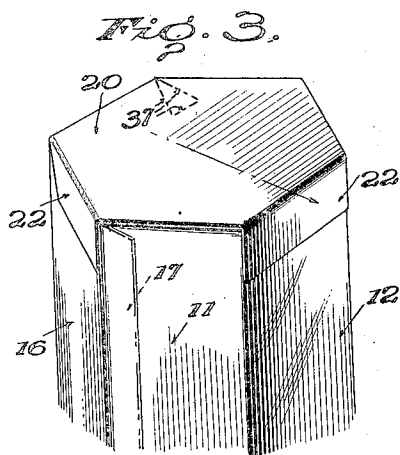
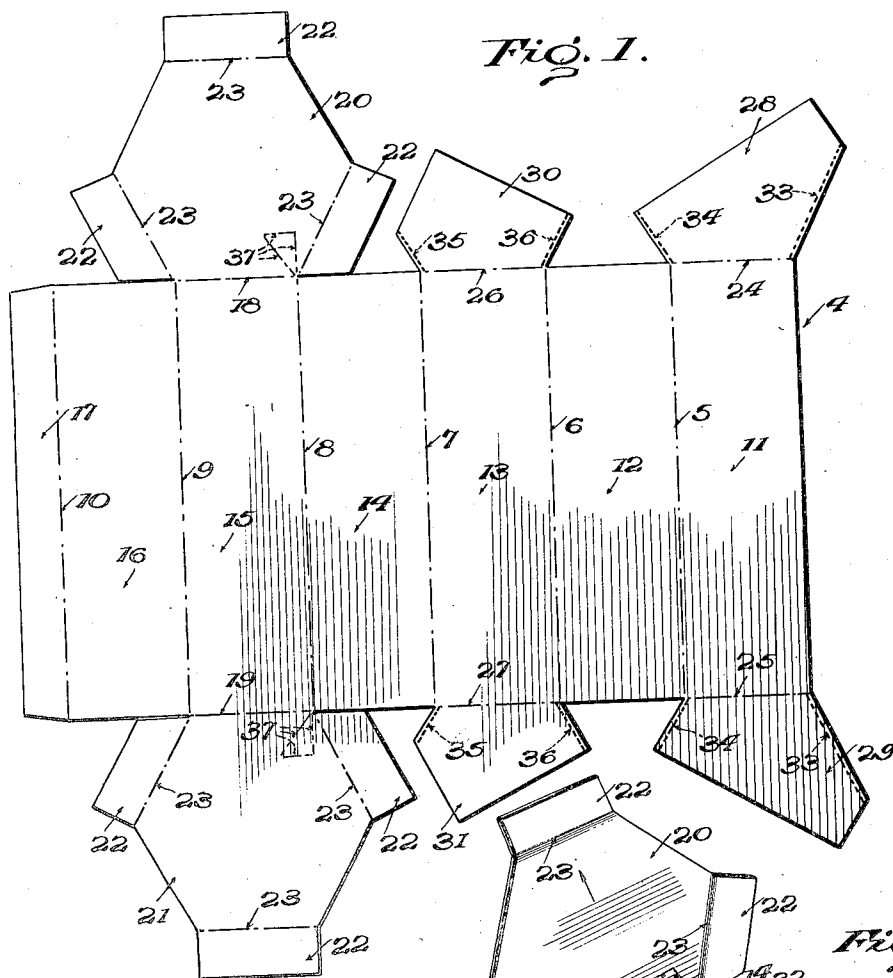
May 16, 1933.

J. L. BAYLESS

1,909,649

CARTON

Filed Sept. 19, 1931



Inventor

John L. Bayless

By *Cameron, Kerkam & Sutton*
Attorneys

UNITED STATES PATENT OFFICE

JOHN L. BAYLESS, OF ANCHORAGE, KENTUCKY, ASSIGNOR TO JEFFERSON ISLAND SALT CO., INC., OF LOUISVILLE, KENTUCKY, A CORPORATION OF KENTUCKY

CARTON

Application filed September 19, 1931. Serial No. 563,851.

This invention relates to cartons or boxes, and more particularly to such containers as are made from unitary blanks of foldable material.

One of the objects of the present invention is to provide a novel carton which may be formed from a unitary piece of foldable material, the carton blank being readily formed by a suitable die and its elements being easily foldable into proper relation to form the complete carton.

Another object is to provide a carton of hexagonal cross-section which may be easily and economically formed from a novelly shaped, unitary blank of foldable material.

A further object is to provide a carton formed from a unitary blank of foldable material, the end closures of which are adapted to be sealed to the outside surfaces of the sides of the carton.

Still another object is to provide a leak-proof carton for containing salt and the like having both outer and inner end closures, the inner end closures being adapted to have adhesive engagement with the inner surfaces of the outer end closures, and the outer end closures having means for adhesive engagement with the outside surfaces of the sides of said carton.

A still further object is to provide an integral carton blank of novel shape which may be quickly and easily folded to form a carton of hexagonal cross-section.

These and other objects will appear more fully from a consideration of the detailed description of the invention which follows. Although only one embodiment of the invention has been described and illustrated in the accompanying drawing, it is to be expressly understood that this drawing is for the purpose of illustration only and is not to be construed as a limitation of the scope of the invention, reference being had for this purpose to the appended claims.

In the drawing:

Fig. 1 is a plan view of one form of blank from which a carton may be constructed in accordance with the present invention;

Fig. 2 is a perspective view of the top por-

tion of the carton in partially assembled condition with the outer end closure open; and

Fig. 3 is a perspective view similar to Fig. 2 showing the carton completely assembled and sealed.

Referring now to the drawing, wherein like reference characters indicate like parts throughout the several views, there is disclosed therein a carton or box which is made from a unitary blank of novel shape, the various elements of the blank being readily foldable to form the complete carton and suitable means being provided for quickly and easily sealing said elements in assembled relationship. As shown, the carton is preferably formed from a unitary blank, indicated generally at 4, of any suitable foldable material such as cardboard, having a substantially rectangular body portion suitably scored transversely along the lines 5, 6, 7, 8, 9 and 10 in order to form a plurality of panels 11, 12, 13, 14, 15 and 16 which form the sides of the carton when it is assembled, and a securing or pasting strip or flap 17 adjacent end panel 16 which is adapted to be coated with suitable adhesive and secured thereby to the inner surface of the opposite end flap 11 when the carton is formed. In the form shown, the body portion of the blank includes six rectangular panels of equal size for forming a carton having a hexagonal cross-section, but it will be understood that the invention is not limited to cartons having rectangular sides, or even to sides all of the same size.

In addition to the body portion comprising the panels forming the sides of the carton, blank 4 is also provided with suitable appendages which are adapted to form the end closures of the carton and which include suitable means for easily and quickly sealing said closures in place. In the form shown, one of the panels intermediate end panels 11 and 16, such as panel 15, is scored at its extremities as indicated at 18 and 19, beyond which score lines said panel is provided with a pair of end flaps 20 and 21. In the embodiment shown, end flaps 20 and 21 are hexagonal in shape and substantially equal in area to the cross-section of the assembled carton, and are

adapted to form the outer end closures therefor. In order that these end closures may be easily and quickly sealed in place, at least one, and preferably three, of the edges of each of end flaps 20 and 21 are provided with suitable pasting tabs or flaps 22, each of such tabs being foldable with respect to its end flaps along a suitable scoring line 23. As shown, each end flap 20 and 21 is provided with three tabs 22 secured to alternate sides of said flaps, each tab being substantially rectangular in shape except at the edges adjacent the body portion of blank 4 where said tabs are necessarily bevelled in order that they may be formed without waste from the same unitary piece of material as the rest of blank 4.

In addition to the outer end closure flaps just described, suitable means have also been provided for furnishing the carton with inner end closure flaps in order to insure a thoroughly tight, leak-proof container especially well adapted for containing salt. In the embodiment shown, a plurality of panels of the body portion of blank 4, other than the panel to which the outer end closure flaps are secured, are provided at each end with polygonal flaps which when folded into proper relation when the carton is assembled form inner end closures of substantially the same size as the outer end closures. As shown, panels 11 and 13 are suitably scored at their extremities as indicated at 24, 25, 26 and 27, and are extended to provide pentagonal flaps 28, 29, 30 and 31. Pentagonal flaps 28 and 29 which are secured to panel 11 are of equal area and each substantially equal to one-half of hexagonal flaps 20 and 21. Pentagonal flaps 30 and 31 may be similar to flaps 28 and 29, but in order to conserve material and to enable the entire blank to be formed from a single piece, flaps 30 and 31 are preferably foreshortened at the corners adjacent flaps 20 and 21, the amount of this foreshortening being such that when the inner flaps are folded into position, there is left a trapezoidal opening 32 at one corner of the box which, if desired, may be used for pouring the contents of the carton when the latter contains pourable material, such as salt. When opening 32 is to be used for this purpose, outer flaps 20 and 21 may also be suitably scored or perforated adjacent one corner thereof, as indicated at 37, to provide a suitably shaped portion of each outer flap in registry with opening 32 which can be opened or removed without disturbing the adhesive engagement of the rest of said flaps and pasting tabs 22 with the inner closure flaps and the side panels, respectively, and thus provide a pouring outlet from the carton.

It will be noted that with the construction thus described, no two of the panels to which closure flaps are secured are adjacent, and

that the pasting tabs 22 of outer end closure flaps 20 and 21 are secured to appropriate edges of said flaps so that when sealed in place they cover the extremities of panels 12, 14 and 16 to which no closure flaps are secured, thereby providing a carton in which every external edge is provided with a complete continuous covering leaving no cracks through which the material with which the carton is packed may escape.

In forming the carton from the blank thus described, the blank having previously been cut or die-stamped from a single piece of material and suitably scored as indicated in the drawing, folds are first made along score lines 5, 6, 7, 8, 9 and 10, and pasting flap 17 coated with a suitable adhesive and secured thereby to the inner surface of panel 11, thereby forming the body portion of the carton.

Folds are then made along lines 24, 25, 26 and 27, and the pentagonal inner end flaps are folded in to the position indicated in Fig. 2. As will be seen from this figure, which shows only the top portion of the box, the bottom portion being formed in exactly the same manner, pentagonal flap 28 closes half of the area of the open end of the carton, flap 30 closing the remainder of the opening with the exception of the trapezoidal opening indicated at 32, previously referred to. The outer surfaces of flaps 28, 29, 30 and 31 are then coated with a suitable adhesive, and outer end closure flaps 20 and 21 are folded down along lines 18 and 19 on top of and into adhesive engagement with the inner flaps. Pasting tabs 22 which have also been coated with a suitable adhesive are then folded along lines 23 and adhesively secured to the outer surfaces of side panels 12, 14 and 16 to complete the closure of the carton. As shown in Fig. 3, when the carton is thus completely sealed, there are no uncovered external edges or cracks through which the contents of the carton may escape. The completely assembled carton may then, if desired, be enclosed in a suitable wrapper as of waxed paper.

When the carton is to be opened for removal of its contents without using the pouring opening formed by scored portion 37, the adhesive engagement between tabs 22 and the side panels of the carton may be broken, and outer closure flap 20 separated from inner closure flaps 28 and 30 and bent back along line 18. It may be desirable in some instances to keep a portion of the contents in the carton after it has been opened, and in such case, if desired, the edges of inner closure flaps 28, 29, 30 and 31 which abut the edges of panels 12, 14 and 16 may have a small portion of the material removed therefrom, as indicated by broken lines 33, 34, 35 and 36 in Figs. 1 and 2, in order that space may be provided through which tabs 22 may

be inserted within the carton to serve as a temporary closure.

There is thus provided by the present invention a novel form of box or carton made from a unitary blank of foldable material which is provided with both inner and outer end closures and novel sealing means for providing a tight, leak-proof container especially well adapted for containing salt and the like. The blank from which the carton is formed comprises a single piece of foldable material of novel shape suitably scored for quick and easy folding into the desired form. Both inner and outer end closures are provided, the inner end closures being adapted for adhesive engagement with the inner surfaces of the outer end closures, and the latter having means for adhesive engagement with the outside surfaces of the sides of the carton. The end closure flaps are secured to alternate panels or sides of the carton, and when folded to assembled form, every external edge of the carton is provided with a complete, continuous covering so as to effectively close all cracks through which the material within the carton might escape. The carton thus formed is simple in structure, and inexpensive of manufacture both as to material and the labor of assembly.

It will be obvious that the invention is not limited to the specific form described and illustrated in the accompanying drawing, but is capable of a variety of mechanical embodiments. For example, the panels forming the sides of the carton may be of any desired shape and size instead of rectangular and equal as shown, and the closure flaps may be secured to any of the panels in any desired arrangement other than that illustrated. Further, the inner end closure flaps are not necessarily restricted to pentagonal shapes, but may be given any desired configuration which will result in an efficient, leak-proof closure. Also, it will be understood that the carton may be constructed in accordance with the present invention with a different number of sides than six, and that the closure flaps may accordingly vary in cross-section from the hexagonal form shown. Various other changes, which will now appear to those skilled in the art, may be made in the form, details of construction and arrangement of the parts without departing from the spirit of the invention, and reference is therefore to be had to the appended claims for a definition of the limits of the invention.

What is claimed is:

1. An integral blank of foldable material for forming a hexagonal carton, comprising a body portion having six panels for forming the sides of the carton, hexagonal closure flaps extending from each end of one of said panels and forming outer end closures for the ends of the carton, polygonal closure flaps extending from each end of two other of said

panels, each pair of said polygonal flaps extending from like ends of said panels forming, when in assembled position, an inner end closure for said carton, no two of said panels having closure flaps being adjacent, and pasting tabs extending from three alternate sides of each of said hexagonal closure flaps and adapted for adhesion to the outsides of the three panels which have no closure flaps extending therefrom.

2. An integral blank of foldable material for forming a hexagonal carton, comprising a body portion having six rectangular panels for forming the sides of the carton, pentagonal closure flaps extending from each end of two of said panels, each pair of said flaps extending from like ends of said panels forming, when in assembled position, an inner end closure for said carton substantially hexagonal in shape with an opening therein, and hexagonal closure flaps extending from each end of one other of said panels and forming outer end closures for the ends of the carton, a portion of each of said hexagonal flaps being scored to provide a removable piece so located that when the carton is assembled said removable piece is in registry with the opening in the corresponding inner end closure.

3. An integral blank of foldable material for forming a hexagonal carton, comprising a body portion having six rectangular panels for forming the sides of the carton, a pasting strip adjacent one of the end panels for adhesive engagement with the opposite end panel when the blank is folded, hexagonal closure flaps extending from each end of one of said intermediate panels and forming outer end closures for the ends of the carton, each of said flaps having pasting tabs for adhesion to the outsides of said panels when the carton is assembled, and pentagonal closure flaps extending from each end of two other of said panels and forming inner end closures for the ends of the carton, no two of said panels having closure flaps being adjacent.

4. An integral blank of foldable material for forming a hexagonal carton, comprising a body portion having six rectangular panels for forming the sides of the carton, a pasting strip adjacent one of the end panels for adhesive engagement with the opposite end panel when the blank is folded, pentagonal closure flaps extending from each end of two of said panels, each pair of said flaps extending from like ends of said panels forming, when in assembled position, an inner end closure for said carton substantially hexagonal in shape with a trapezoidal opening therein, and hexagonal closure flaps extending from each end of one other of said intermediate panels and forming outer end closures for the ends of the carton, each of said hexagonal flaps having pasting tabs for adhesion to the outsides of said panels when the carton is assembled, and a portion of each of said hexag-

onal flaps being scored to provide a removable piece so located that when the carton is assembled said piece is in registry with the opening in the corresponding inner end closure.

5. An integral blank of foldable material for forming a polygonal carton, comprising a body portion having a plurality of rectangular panels for forming the sides of the carton, polygonal closure flaps of the same shape as the cross section of said carton extending from each end of one of said panels and forming outer end closures for the ends of the carton, every alternate side of each of said flaps having a pasting tab for adhesion to the outside of one of said panels when the carton is assembled, and polygonal closure flaps extending from each end of a plurality of other of said panels and forming inner end closures for the ends of the carton, no two of said panels having closure flaps being adjacent.

6. An integral blank of foldable material for forming a hexagonal carton, comprising a body portion having six rectangular panels of equal size for forming the sides of the carton, a pasting strip adjacent one of the end panels for adhesive engagement with the opposite end panel when the blank is folded, hexagonal closure flaps extending from each end of one of said intermediate panels and forming outer end closures for the ends of the carton, three of the sides of each of said flaps having pasting tabs for adhesion to the outsides of three of said panels when the carton is assembled, and pentagonal closure flaps extending from each end of two other of said panels, each pair of said pentagonal flaps extending from like ends of said panels forming, when in assembled position, an inner end closure for said carton, no two of said panels having closure flaps and no two of said pasting tabs being adjacent, the inner end closures thus formed each being substantially hexagonal with a trapezoidal opening therein and being adapted for adhesion to the inner surfaces of said outer end closures.

7. A carton formed from an integral blank of foldable material including a body portion having a plurality of side panels, inner end closure flaps secured to the ends of a plurality of said side panels, outer end closure flaps secured to the ends of another of said side panels, no two of said side panels having closure flaps being adjacent, and a plurality of pasting tabs secured to alternate edges of each of said outer end closure flaps and adapted for adhesive engagement with the outside surfaces of the side panels to which no closure flaps are secured, thereby providing a continuous covering for every external edge of said carton and rendering it substantially leak-proof.

8. A carton formed from an integral blank of foldable material including a hexagonal

body portion having six side panels, polygonal inner end closure flaps secured to the ends of two of said side panels, hexagonal outer end closure flaps secured to the ends of another of said side panels, no two of said side panels having closure flaps being adjacent, and pasting tabs secured to alternate edges of each of said hexagonal outer end closure flaps and adhesively engaged with the outside surfaces of the three side panels to which no closure flaps are secured, thereby providing a continuous covering for every external edge of said carton and rendering it substantially leak-proof.

In testimony whereof I have signed this specification.

JOHN L. BAYLESS.

95

90

95

100

105

110

115

120

125

130