

Jan. 24, 1928.

1,656,919

H. V. MARSH

BOX

Filed March 13, 1925

3 Sheets-Sheet 1

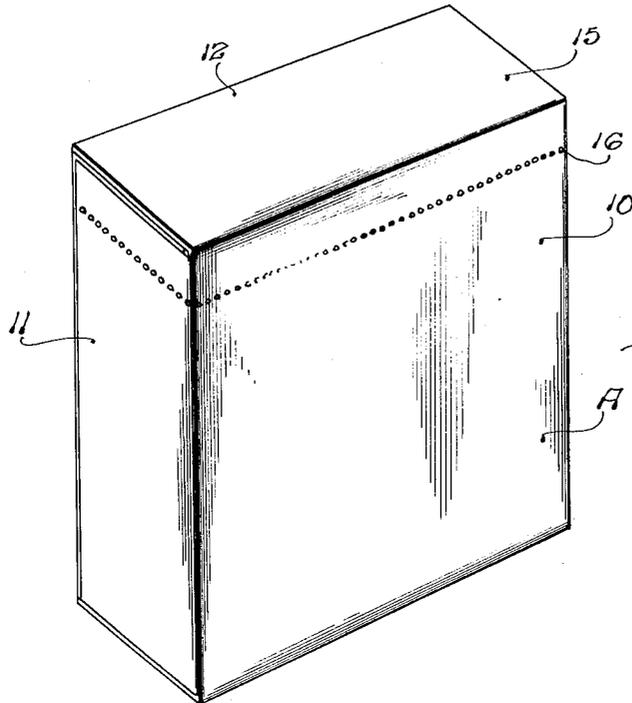


FIG. 1

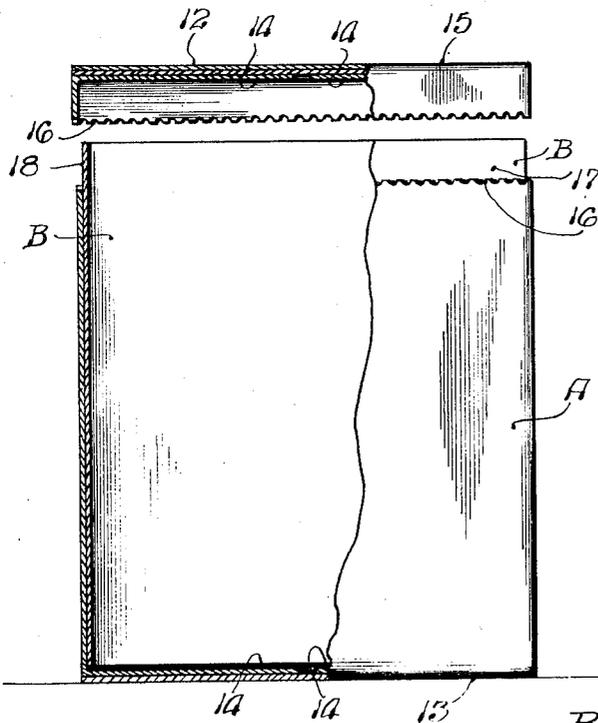


FIG. 2

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3 Sheets-Sheet 2

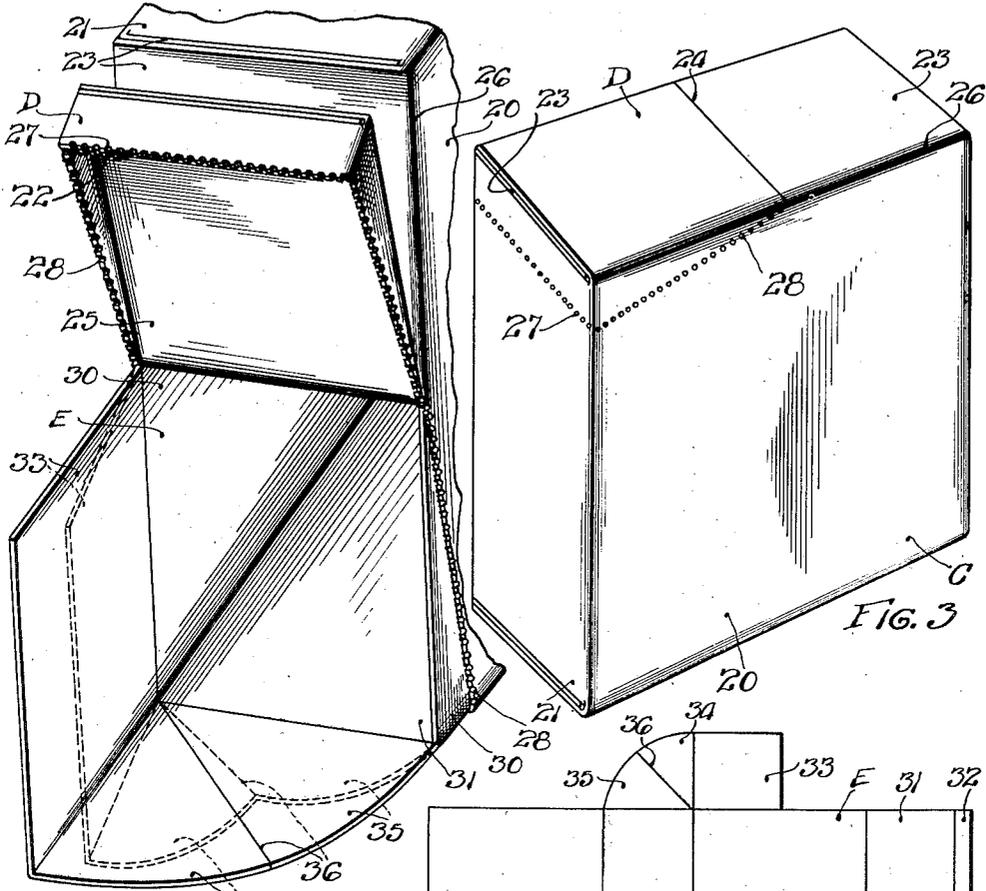


FIG. 3

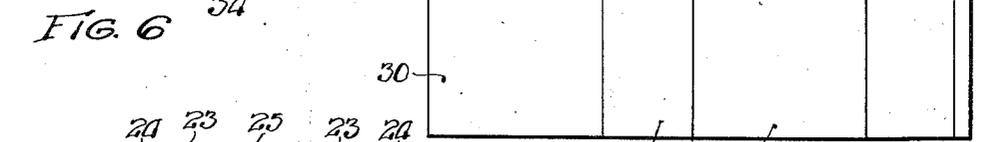


FIG. 4

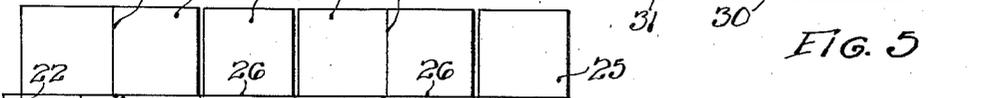


FIG. 5

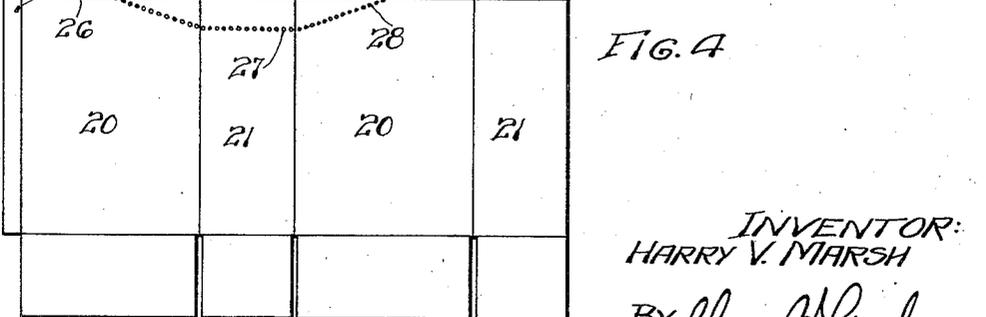


FIG. 6

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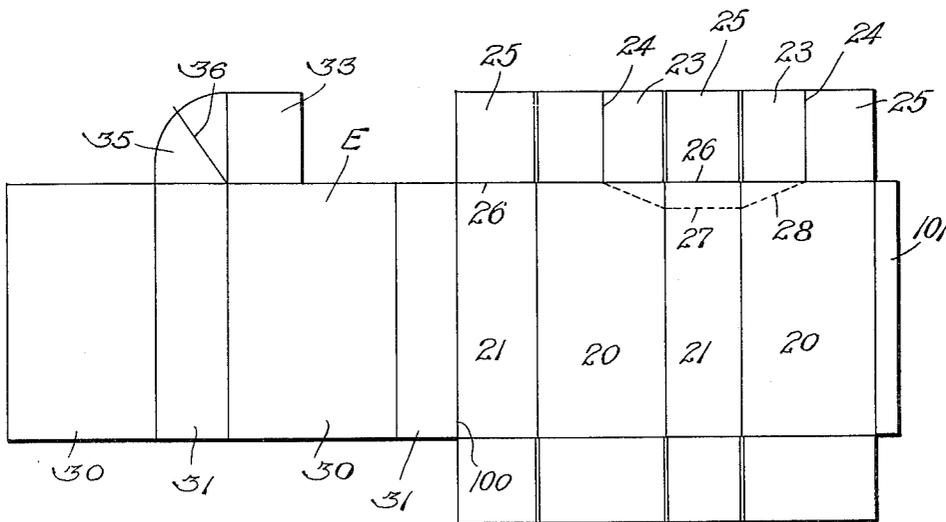
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3 Sheets-Sheet 3

Fig. 7.



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# UNITED STATES PATENT OFFICE.

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## BOX.

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The present invention relates to containers and particularly to boxes adapted to be made from cardboard or similar material. The invention resides particularly in the employment of an insert or inner seal for a box and a box construction with respect thereto, such construction including in one of the forms, a spout forming means.

Among the objects of the invention are the following:—

The provision of a novel box structure comprising a removable or partly removable top in association with an insert or inner sealing portion;

The combination with a box of an insert member adapted to provide a spout;

A novel reinforced box structure including a removable or partly removable cover in association with a spout member adapted to provide a pouring spout;

The combination of an unique box structure having a hinged cover in combination with a reinforcing member providing a spout and locking the cover in open position when such spout is in use.

These, and such other objects as may hereinafter appear, are obtained by the novel construction, combination, and arrangement of the several elements which constitute the embodiments of the invention herein disclosed.

Two sheets of drawing are submitted and are hereby made a part of this application.

In the drawing:—

Figure 1 comprises a perspective view of one embodiment of the invention.

Figure 2 comprises a side view partly in section and partly in elevation showing the box illustrated in Figure 1 with its top section removed.

Figure 3 is a perspective view of a second form of the invention.

Figure 4 is a plan view of the blank used for forming the exterior portion of the box illustrated in Figure 3.

Figure 5 is a plan view of the blank used for the inner member employed in said box.

Figure 6 is a detail partly in perspective illustrating the spout structure, the full lines showing the spout in extended position, and the dotted lines disclosing the manner of folding the spout preliminary to closing the box.

Figure 7 is a plan view of a blank used for the production of the form of box shown in

Figure 3, said blank being designed to be folded to produce the complete box, having both inner and outer sections.

Like reference characters are used to designate similar parts in the drawings and in the description which follows.

Reference should be had first to Figures 1 and 2 illustrative of one embodiment of the invention. In this form of the invention an outer or box member A is employed in conjunction with an inner sealing or reinforcing member B.

The box member comprises a blank of conventional form comprising sides 10, ends 11, top 12, bottom 13 and the usual extension flap for securing the end 11 to a side 10. The extension flap is not disclosed in the drawing.

Upon each of the ends 11 is a fold-over extension 14 which extension is adapted to securely seal the top and bottom of the container in conjunction with extension members 15 secured to sides 10. As is usual in box construction, the flaps 14 are folded over and glued to one of said extension members 15 and the second extension 15 folded over and made to adhere to the first of said extensions 15, thereby forming in one instance the top 12 and in the other instance the bottom 13.

A continuous score 16 extends the entire length of the blank and includes both sides 10, both ends 11 and the flap adapted to seal one of the ends to one of the sides to give a rigid structure.

The blank thus provided is folded in the usual way at the proper stage of manufacture, but during the process of folding, either before the top 12 and the bottom 13 is produced, or after one thereof is provided, the insert member B is placed within the box. Insert member B comprises side members 17 corresponding substantially but being of slightly less width than sides 10 of box A, and end members 18 corresponding to end members 11 but being of slightly less width.

A flap is provided upon a side 17 or an end 18 whereby one of said sides may be secured to one of said ends preliminary to insertion in box A.

The height of member B is slightly less than of the internal dimension of box A so that it may be readily inserted into box A and the top and bottom 12 and 13 of box A formed without difficulty.

When the box is filled and sealed, it presents an air tight structure. In order to open it, the thumb nail or some sharp instrumentality is made to follow the score line 16 detaching the top 12 including that portion of the sides 10 and 11 above the score 16 from the remainder of the box A. The cover is then lifted off and the contents of the box may be removed as required. The cover is adapted to be replaced from time to time until the box is discarded.

In Figures 3, 4, 5 and 6 a second form of the invention is illustrated. A box C having a cover portion D and an insert E is provided. Box C and cover D are integrally formed and cover D is preferably hinged to box C as hereinafter described, but of course may be modified as to its manner of connection to the box C. It may be made of greater or less dimension than illustrated or adapted to open in a direction other than that shown.

The box C comprises sides 20 and ends 21 and an extension flap 22 which may be coextensive with the sides 20 and which is adapted to adhesively secure one of the ends 21 to the opposite side 20. Sides 20 are provided with extensions 23 divided by a score 24, such score 24 extending from the fold line of side 20 vertically to the outside margin of said extension 23. Ends 21 are provided with extensions 25. In each of sides 20, an oblique line of perforations 28 is provided, and these extend from the internal end of the score 24 toward one another and to the edge of intermediately disposed side 20. Perforations 26 are parallel when the box is in folded position.

Upon the end 21 intermediate perforations 28 is a line of perforations 27 extending from the ends of the perforations 28 horizontally across said end 21. The perforations can be placed at the opposite end when so desired.

The box is folded and adhesive material applied to the flap 22 in order to give the box its rectangular configuration in the usual manner. One end may be sealed before the insert E is placed within the outer container C or insert E may be put in position before either end of the box C is sealed up.

The insert E comprises sides 30 and ends 31 slightly narrower and of less height than the sides 20 and ends 21 of box C. An extension 32 for adhesively securing one of said ends 30 to one of said sides 31 is provided.

Upon one of the sides 30 and the adjacent end 31, an extension flap comprising three sections is provided. That portion of the extension 31 just described upon the side 30 comprises a generally rectangular member 33, and in the form disclosed, of slightly less length than the cover D. The sections of the extension referred to upon the end 31

are indicated 34 and 35 and each comprises a quarter segment of material, one bounded on one side by the score line separating end 31 from section 35 and the other bounded upon the other side by the score line separating extension 33 from section 34. A score line 36 divides section 34 from section 35 and said sections are of substantially the same size.

Having secured end 31 to the opposite side 30 by the use of adhesive upon the extension 32, the member E is placed within the container C and the latter filled and sealed. An air tight package is thus provided, such package being adapted to be opened by using the thumb or finger nail or a sharp instrumentality on the perforate lines 28 and 27. This detaches the cover D so that it may be folded back on the score lines 24 to provide a hinged cover for box C.

That portion of insert E including the extensions 33, 34 and 35 is directly beneath the opening formed in container C by tilting upwardly said cover. By lifting extension 33 with the finger or thumb, its free end is made to engage the cover D to force such cover backwardly and out of the way as a spout is conjointly formed of the extensions 33, 34 and 35, as illustrated in Figure 6. In that particular figure, the cover D is forced back more than its normal position for the purpose of disclosing its structural details, but said cover ordinarily rests upon the contiguous edge of extension 33 and remains in open position until the extensions 35 and 34 are inwardly folded upon the score 36 and extension 33 folded downwardly thereover. The box C may be continued in use as long as desired, and at all times provides a sanitary and substantially air tight container.

It is quite manifest from the description here given and from the drawings that the cover D may be of various sizes and could be made to open in directions other than those here shown.

The blanks for box C and insert E may be conjointly cut as an integral strip with the elimination of flap 32. When this is done, the blank for insert E is folded over the blank box C at their juncture, the box C folded in the usual manner, and adhesive is applied to strip 22 in the customary way. This manner of folding and gluing eliminates several folding and one gluing operation.

Instead of employing an outer box section as shown in Figure 4, and a lining therefor, as shown in Figure 5, to produce the complete box structure shown in Figure 3, the entire box, including the lining, may be formed from a single blank, in which case the blank has the form indicated in Figure 7. For convenience of description the same reference characters are employed to indicate

the main parts of the integral blank as are employed in reference to two blanks shown in Figures 4 and 5.

It will be noted, however, that since the blank is integral, the extension flap 22, shown in Figure 4, is omitted, as well as the extension flap 32 shown on the blank in Figure 5. Instead a continuous section of material is employed with a score 100, while a single extension flap 101 is provided on the end of the integral blank.

The blank shown in Figure 7 is folded on all of the transverse scores until an open ended box structure, having double thickness walls, is formed. It is folded double on the score 100 first, and then folded with the lining portion inwardly, until a double layer box is formed. The extension flap 101 is then inserted between the inner and outer box and adhesively secured in place to hold the folded blank together. The portions 33, 34 and 35, are then folded inwardly, and the end extensions on the outer box portions also folded in place. The end extensions on the outer box are then adhesively secured to each other, care being exercised to prevent adhesion to the end portions 33 to 35 on the inner box section.

When the box is to be used as a container, it is obviously filled before the top portion is sealed. In this event the lower end portions are adhesively secured in place, the box filled, and the upper or top extensions then sealed in place. The manner of opening the container shown in Figure 3 is referred to more in detail.

I claim:—

1. In a box, an outer wall, an inner member disposed adjacent said wall, said inner member conforming in shape with said outer wall with which it is integrally formed, and extensions on said inner member creased to define a spout.

2. In a box, an outer wall, an inner member, disposed adjacent said wall, said inner member conforming in shape with said outer wall with which it is integrally formed, creases in said inner member forming a collapsible spout there being perforations in said outer wall to provide a readily liftable cover to selectively maintain said spout in its collapsed position.

3. A box comprising an outer member having perforations permitting the separation of a top section therefrom, an inner member

defining a portion telescopic with said top, and means on said inner member effective to form a foldable spout collapsible beneath said top section.

4. A box comprising an outer member having perforations permitting the separation of a top section therefrom, an inner member defining a collapsible extension telescopic within said top, said top being hinged to normally register with said extension in its collapsed position.

5. A box comprising an outer member having perforations permitting the separation of a top section therefrom, an inner member defining an adjustable spout arranged for disposition within said top, said spout being operable to maintain said top removed when said spout is in its operative position.

6. A blank creased to form a box having outer and inner walls, certain of said outer walls being perforated to provide a hinged top, an extension on said inner walls creased to define a spout adapted to be disposed within the opening created by the removal of said hinged top.

7. A container formed from a single blank of material, comprising inner and outer sections, the inner section being provided with sides and a top portion, and the outer section provided with sides and top and bottom portions, one of said sides in said outer portion having perforations there across, the contiguous sides having perforations in continuity therewith, and the top members thereof being scored from the point where the perforations on the contiguous sides terminate, the top portion on the inner box section and the perforations on the outer box section being so disposed in relationship to one another that the severing of the material along the line of such perforations permits the formation of a hinged top for the outer box section with the top portion on the inner box section disposed immediately below, said top portion being adapted to be folded into the same plane as its associated sides to form a spout for the container.

8. A container as defined in claim 7 and in which the top portion of the interior section has an arcuate edge to permit of the ready withdrawal of the resulting spout, said spout functioning to support the tilted portion of the outer box.

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