Dec. 19, 1933. W. J. GEIST 1,940,412

SPOUT EQUIPPED BOX

Filed Dec. 14, 1931

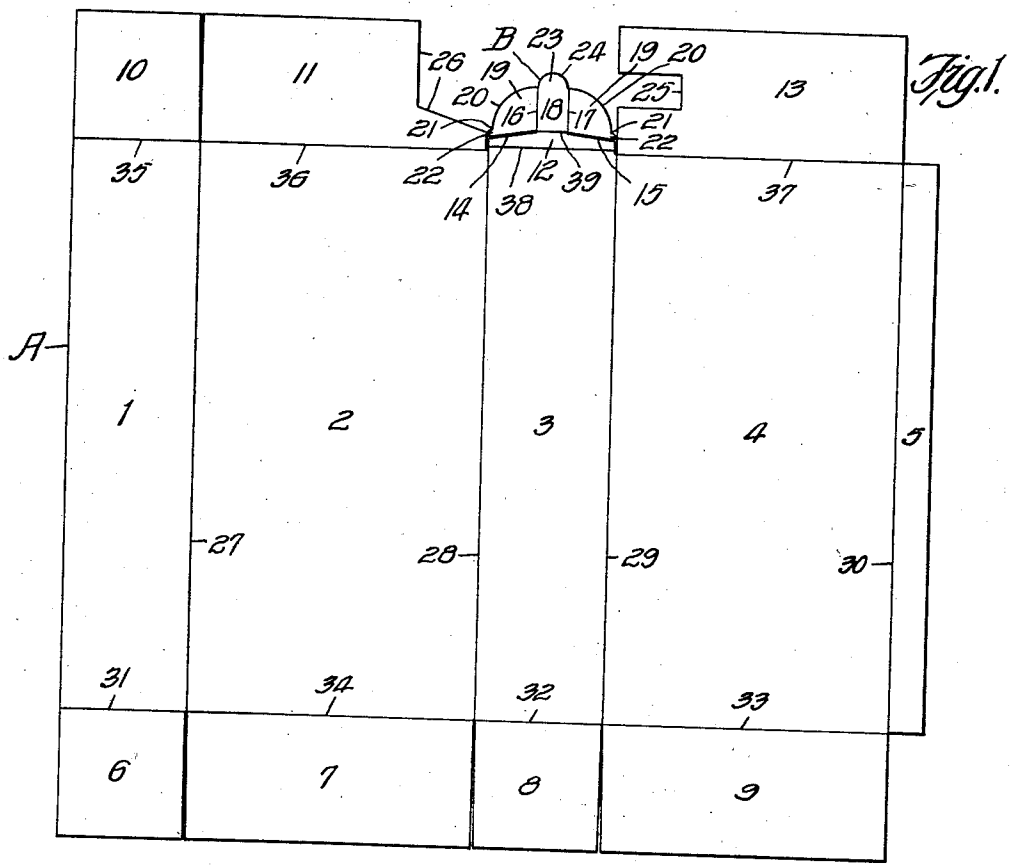


Fig. 1.

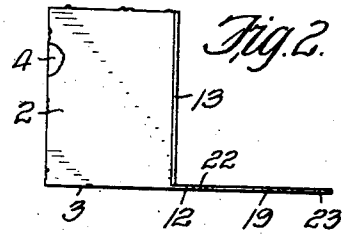


Fig. 2.

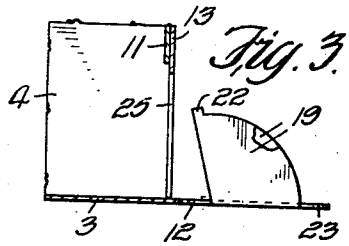


Fig. 3.

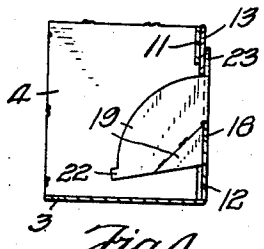


Fig. 4.

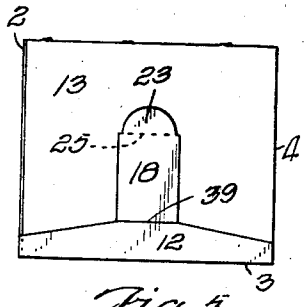


Fig. 5.

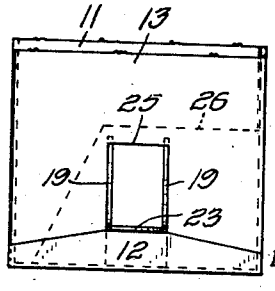


Fig. 6.

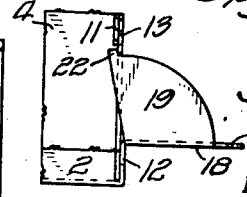


Fig. 7.

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SPOUT EQUIPPED BOX

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Application December 14, 1931
Serial No. 580,746

12 Claims. (Cl. 229—17)

My invention relates to containers and more particularly to a folding paper board box adapted to contain dry products that can be poured therefrom, and, it is a distinct and practical improvement designed to overcome certain practical objections to, and defects in, containers having integral pouring spouts.

The primary object of my invention is to improve the spout construction of a folding box container wherein the spout structure is an integral part of the paper board material of the box, and, thereby provide a box of the pouring spout type which possesses advantages in points of simplicity and efficiency, and, at the same time proves itself comparatively inexpensive in cost of manufacture.

A further object of the invention resides in the provision of a box from a blank wherein the pouring spout proper is formed entirely from one of the flaps, or extensions of one of the walls of the box, thus not requiring more than the material of the flap for the formation of the spout.

With the above and other objects in view, the invention consists in the novel features of construction, arrangement and combination of parts hereinafter more fully described and finally pointed out in the claims hereto appended.

Referring to the accompanying drawings forming a part of this specification, wherein like characters of reference denote similar parts throughout the several views:

Fig. 1 is a view of the blank as it is cut and scored preparatory to folding same into box formation.

Fig. 2 is a side view of the spout corner of the box just prior to folding the spout wings into parallel position.

Fig. 3 is a sectional view of one corner of the box showing the spout wings folded into parallel position.

Fig. 4 is a sectional view of one corner of the box showing the spout carrying flap folded into position and the spout in its closed position.

Fig. 5 is a top plan view of one corner of the box showing the spout closed.

Fig. 6 is a similar view showing the spout open.

Fig. 7 is a view of one corner of the box showing the spout in side elevation and in its open position.

The box, container, or carton is formed from a suitable paper, or paste board blank, and such blank is designated generally as A, and clearly illustrated in Fig. 1 of the drawing from the inside face thereof.

The blank A is shown as having, or comprising the several box wall sections designated 1, 2, 3, 4 and 5, and the flap sections designated 6, 7, 8, 9, 10, 11, 12 and 13 and a final section designated generally as B, which latter section represents the material from which the pouring spout is formed. All the flap sections are severed from each other, as is customary in the art of paper folding boxes of the class herein described.

The section B is partly severed from the extension 11 by inclined slits 14 and 15 which slits extend from the side edges of section 12 and section B and inclined toward the inner ends of the score lines designated 16 and 17, respectively, running longitudinally of the spout section B, in spaced parallel relation, to divide the spout section B into an intermediate, or floor section 18, and two like wing sections each designated 19. The two wing sections have their free edges curved, as at 20, and the corners of the wing sections adjacent the side edges of section 12 are cornered, as at 21 to provide corner wing extensions 22 adapted to act as stops for engagement with the inner face of section 13, as will be more clearly apparent hereinafter. The free end of the floor section 18 of the spout is extended beyond the curved edges of the wings 19 to act as a finger grip 23 for opening the spout and the edge thereof is preferably curved, as at 24.

The finger grip extension 23 is adapted to engage the upper face of section 13 when the spout is closed to limit its closing movement thereof, as will be more clearly apparent hereinafter.

Section 13 of the blank is provided at its inner end with a centralized rectangular cut out portion, or recess 25 to serve in the capacity of an outlet opening for the discharge of contents from the box, and, it is adapted to be closed by means of the spout, when the spout is in its closed position and to be opened by swinging movement of the spout from its closed into its open or pouring position.

Section 11 of the blank is provided at its inner edge portion with a suitable cut out portion or recess 26 to permit of the passage of the wings of the spout into the box through flap section 11 when moving the spout into its closed position from its open position. Recess 26 of section 11 is preferably cut back slightly farther than recess 25 of section 13, so as to allow the spout wing stops 22 to engage the inner face of section 13 when the spout is in open position, although this is not necessarily required as the stops 22 can, if desired, engage the inner face of section 11 of the blank when the blank has been folded into box shape formation.

In forming the blank into box formation, sections 1, 2, 3, 4 and 5 are folded along the score lines 27, 28, 29 and 30 to form a rectangular body structure, and section 1 overlaps, prefer-

ably on the outside of section 5 and it is adhesively secured thereto. Sections 6 and 8 are then folded inwardly on the score lines 31 and 32, and then section 9 is folded on score line 33 to lap over sections 6 and 8, and finally section 7 is folded on score line 34 to overlap section 9 and it is adhesively secured thereto. Thus, the side walls and the bottom of the box are formed in the usual manner of folding paper box construction with four thicknesses of paste board forming the bottom of the box.

Section 10 is then next folded inwardly on score line 35. Following, section 11 is folded on score line 36 to overlap section 10, and then section 13 is folded on score line 37 to overlap section 11, and it is adhesively secured thereto.

Next, the two wing sections 19 are folded toward each other on the score lines 16 and 17 so as to lie parallel with each other, and finally, the short flap section 12 is folded on score line 38 to rest on the recessed end of section 13 and it is adhesively secured thereto. In order to permit section 12 to overlap the recessed end of section 13, the score line 38 is formed out of alignment with score lines 36 and 37, so as to allow for folding of section 12 over flap section 13, which itself overlaps section 11. When the box has been thus formed, it will be observed that section 12 and floor section 18 of the spout lie in a plane with each other and with the finger grip 23 resting on the upper face of section 13 adjacent the inner end of recess 25. Thus, it will be observed, the top of the box is formed in the usual manner with the exception that the short flap section 12 overlaps the outer section 13 instead of being overlapped by sections 11 and 13, as is usual in folding paper box construction.

During the folding over of section 13, it will be observed that the wing sections 19 are to be directed into the opening formed by the recess 25, in section 13, and the spout is then in its closed position with the finger grip engaging the upper face of section 13 adjacent the inner end of recess 25 to limit further inward movement of the spout relative to the opening formed by the recess 25.

To open the spout, the floor 18 thereof is pulled upwardly and back on the score line 39 by grasping the finger grip 23, and when it is swung to a full open position, the stops 21 will engage the inner face of section 13 adjacent the inner end of the filling and discharge opening formed by the recess 25. The recess 25 does not necessarily have to be used as a filling opening, but can be so used, if desired.

From the foregoing description, it is evident that I provide a pouring spout for boxes, which is formed integral with, or articulated from the material of one of the top flaps, which is the same width as the flap when the wings of the spout are flattened out and wherein the wings of the spout are readily foldable for insertion into the discharge opening of the box for closing the same, and wherein the spout can be readily swung to an open position to permit pouring of contents from the box.

The many advantages of the herein described invention will readily suggest themselves to those skilled in the art to which it appertains.

From the foregoing description, it is evident that a simple device for this purpose has been disclosed, but it is to be understood that I do not desire to restrict, or limit myself to the very details of the construction shown and described, which is merely illustrative, it being obvious that changes, not involving the exercise of invention, may be made without conflicting or departing from the spirit of the invention within the scope of the appended claims.

What I claim is:

1. A paper box having a top formed of a plurality of flaps, at least one of said flaps having one edge thereof rectangularly recessed and the recessed flap overlapping one of the other flaps, another of said flaps which is relatively short being folded over the recessed side edge portion of the outer flap and adhesively secured to the recessed end thereof to form a pouring opening and a winged spout closure for said opening the base of which is articulated to said relatively short flap and the base including the wings articulated thereto being of a width equal to the width of said relatively short flap.

2. A box having a top formed of a plurality of flaps, two of which flaps are recessed, one of said recessed flaps folding over the other to provide a rectangular opening, another of said flaps folding over the outer of the two recessed flaps and adhesively secured to the edge portion of the outer of said two recessed flaps to finally form the opening and said latter flap being slit from opposite side edges thereof to provide a spout base articulated to said latter flap and two wing sections articulated to said spout base and said base and wings assuming the width of the flap to which the base is articulated.

3. A box having a top formed of a plurality of flaps, two of which are side flaps recessed at one end thereof, one of said recessed flaps folding over the other to provide a rectangular opening at one end of the outermost of said flaps, another of said flaps being a relatively small end flap foldable over the outer of the two recessed flaps and adhesively secured to the recessed end thereof to finally form said opening, said relatively small end flap being slit from opposite side edges thereof to provide a spout base articulated to said end flap and to provide two spout wing sections articulated to said spout base and a finger grip formed integral with the free end of the spout base.

4. A box having a top formed of a plurality of flaps, two of which are recessed, one of said recessed flaps folding over the other to provide a rectangular opening, another relatively short flap overlapping a portion of the outer of the two recessed flaps and adhesively secured to the edge portion of the outer recessed flap to finally form said opening, said relatively short flap being slit from opposite side edges thereof to provide two folding spout wing sections and an intermediate spout floor section, a finger grip formed at the free end of the spout floor section and stops formed at the free corners of the spout wing sections and said spout section being the full width of the flap from which it is formed before the wing sections are folded to operative position.

5. A box having a top formed of a plurality of flaps, at least one of said flaps having a midway rectangular recess along one side edge thereof and said recessed flap overlapping one of the other flaps, another of said flaps being relatively short and overlapping the recessed edge portion of the recessed flap and adhesively secured thereto to form a rectangular pouring opening and a spout having foldable wings articulated to the relatively short flap with the

foldable wings of the spout insertable through the rectangular pouring opening.

6. A container having side wall pieces, a bottom wall and a top wall, said top wall comprising a plurality of overlapping flaps which are extensions of the side pieces, at least one of said overlapping flaps having a midway recess formed along one edge thereof, a short top wall projection on one end of one of the side wall pieces, said projection overlapping the top recessed edge portion of the top wall flap and adhesively secured thereto to form a rectangular pouring opening and to reinforce the recessed edge portion of the recessed flap, a pouring spout closure for said opening and said pouring spout closure being articulated at one end to said short top wall projection.

7. A one piece paper board container comprising, in combination, bottom pieces, side pieces and a plurality of cover pieces, the innermost of the cover pieces being non-recessed, the intermediate cover piece having a corner section thereof cutaway, the outer cover piece having one edge thereof recessed to overlap the cutaway portion of the intermediate cover section and provide a pouring opening, a relatively short flap section directed from the upper edge of one of the side pieces and adhesively secured to the edge portion of the outer recessed cover section to span the open end of the recess thereof and to finally form an opening, a pouring spout including a floor section and two opposed segmental wall sections, the floor section being articulated to the side wall extension and said side wall sections of the pouring spout being articulated to the floor section and insertable into the opening formed by the recesses of the intermediate and outer cover pieces and the extension of one of the side pieces.

8. A one piece paper board container comprising, in combination, bottom pieces, side pieces and a plurality of cover pieces, the innermost of the cover pieces being non-recessed, the intermediate cover piece having a corner section thereof cutaway, the outer cover piece having one edge thereof recessed to overlap the cutaway portion of the intermediate cover section and provide a pouring opening, a relatively short flap section directed from the upper edge of one of the side pieces and adhesively secured to the edge portion of the outer recessed cover section to span the open end of the recess thereof and to finally form an opening, a pouring spout including a floor section and two opposed segmental wall sections, the floor section being articulated to the side wall extension and said side wall sections of the pouring spout being articulated to the floor section and insertable into the opening formed by the recesses of the intermediate and outer cover pieces and the extension of one of the side pieces, means on said floor section of the pouring spout to limit closing movement thereof by contacting with the outer face of the outer cover piece and stops formed on the segmental wall sections of the pouring spout limiting opening movement of the pouring spout by contacting with the inner face of the intermediate cover piece.

9. A carbon top comprising a pair of cover flaps having recesses formed along one edge thereof serving to form an opening when the flaps are overlapped, a relatively short extension directed from one of the side walls of the carton and of equal width thereof, said extension being folded over the uppermost cover flap and serving to span the open end of the cover recesses and form the fourth edge of an opening formed by the recesses and a spout including a floor articulated to the extension and side walls articulated to the floor.

10. A paper board container having, in combination with two overlapping top end wall flaps and at least one of which is provided with a recess along one of the side edges thereof, a flap articulated to the top end of the side walls of the container adjacent said recess, said flap being of equal width of the side wall to which it is articulated and the flap being shorter in length than the width of the side wall to which it is articulated, said flap being folded over and adhesively secured to the flap having the recessed edge to cover the open end of the recess and form the fourth and outer edge of an opening into which the recess is converted, a spout base articulated to said side wall flap and said spout base having opposed segmental wings articulated thereto and insertable through said opening and said spout base and wings therefor when flattened relative to the spout base do not exceed the width of the side wall flap to which the spout base is articulated.

11. A paper board container having, in combination with two overlapping top and wall flaps and at least one of which is provided with a recess along one of the side edges thereof, a flap articulated to the top end of the side walls of the container adjacent said recess, said flap being of equal width of the side wall to which it is articulated and the flap being shorter in length than the width of the side wall to which it is articulated, said flap being folded over and adhesively secured to the flap having the recessed edge to cover the open end of the recess and form the fourth and outer edge of an opening into which the recess is converted, a spout base articulated to said side wall flap and said spout base having opposed segmental wings articulated thereto and insertable through said opening, said base having an end finger grip projecting beyong the wings to serve as a stop when closing the spout and said wing sections having projections serving to limit opening movement of the spout wings and said spout base, wings thereof and wing projections do not exceed when in flat formation, the width of the side wall flat to which the spout base is articulated.

12. A paper board container blank cut, slit and scored to provide a front wall piece having a securing strip, a rear wall piece, two side wall pieces, four bottom wall pieces and four top wall pieces, one of the top wall pieces having an angular cutaway portion, another of the top wall pieces having a right angular midway recess formed along its edge adjacent the aforesaid top wall piece having the angular cutaway portion, another of the top wall pieces being relatively short and including a spout base section, a pair of wing sections, a projection on the spout base section projecting beyond the edges of the wing sections and projections on the wing sections and said spout base section, wing sections and the wing projections having a total width equal to the width of the relatively short top wall piece.

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