Jan. 11, 1944. D. DAVIS 2,339,156

DISPENSING CONTAINER

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FIG. 1.

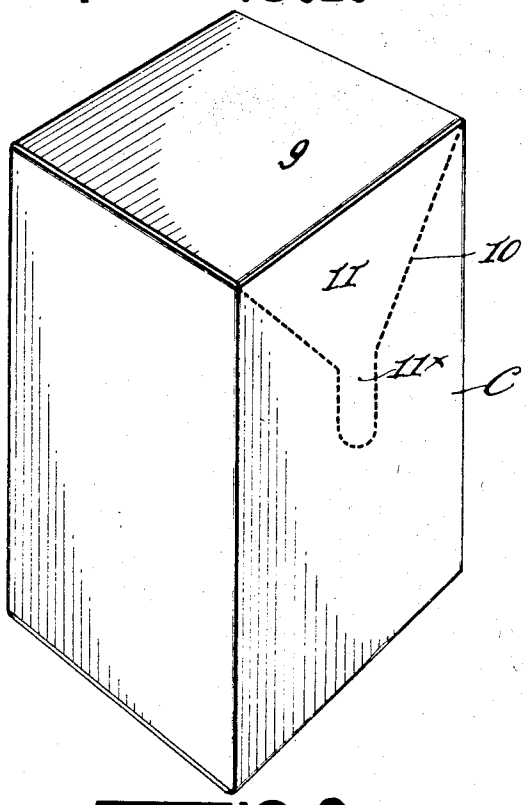


FIG. 2.

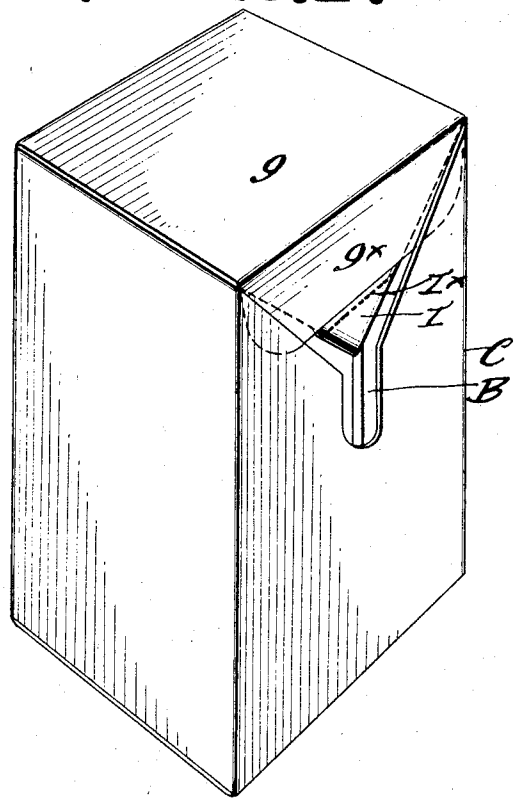


FIG. 3.

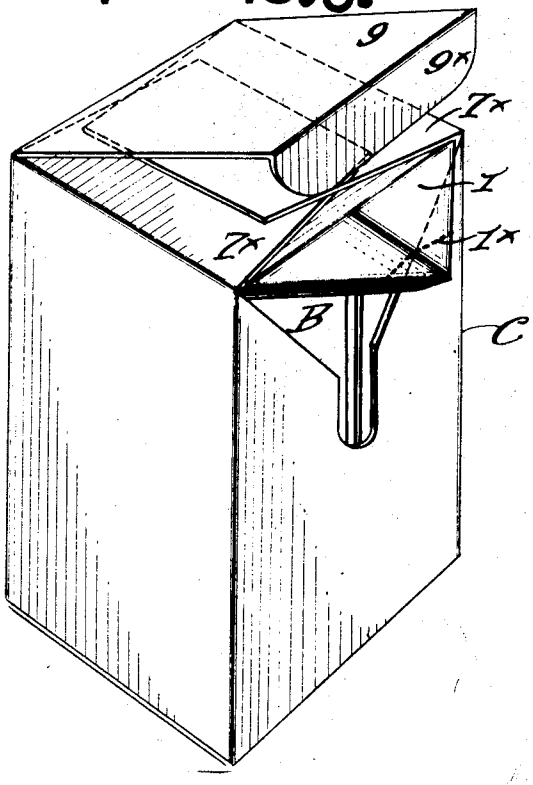
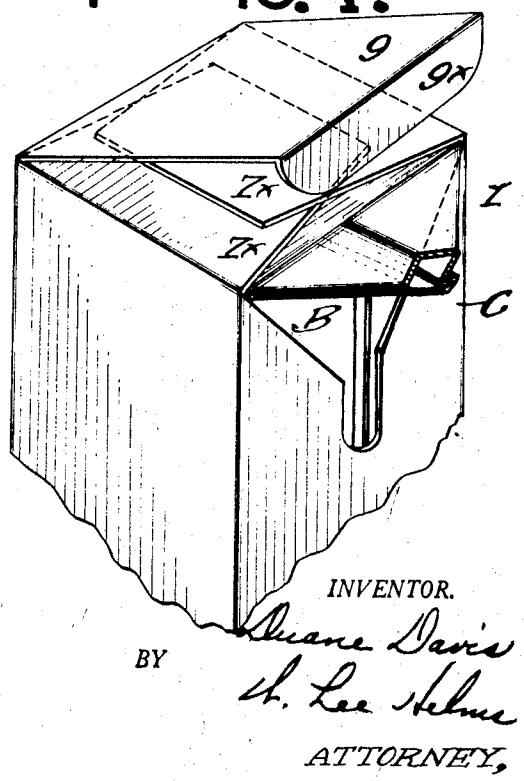


FIG. 4.



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FIG. 5.

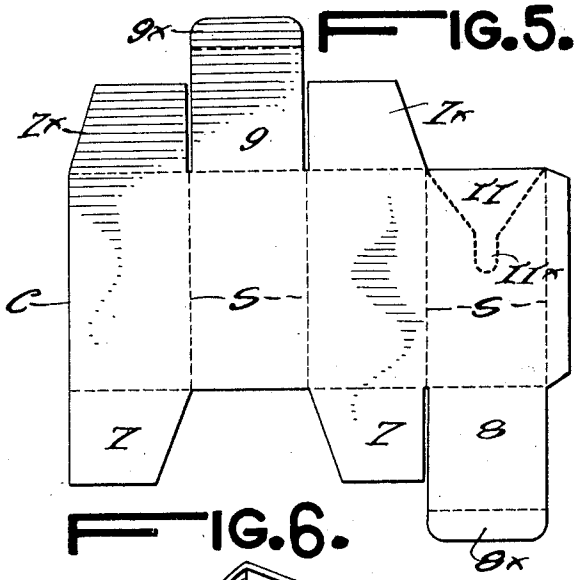
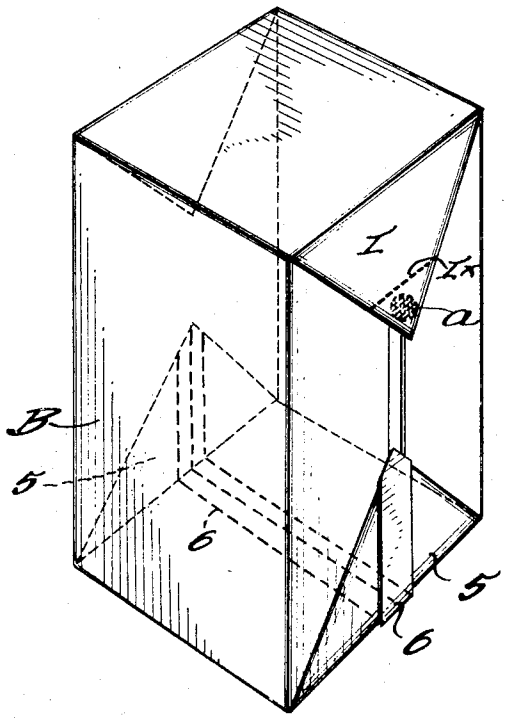


FIG. 6.

FIG. 7.



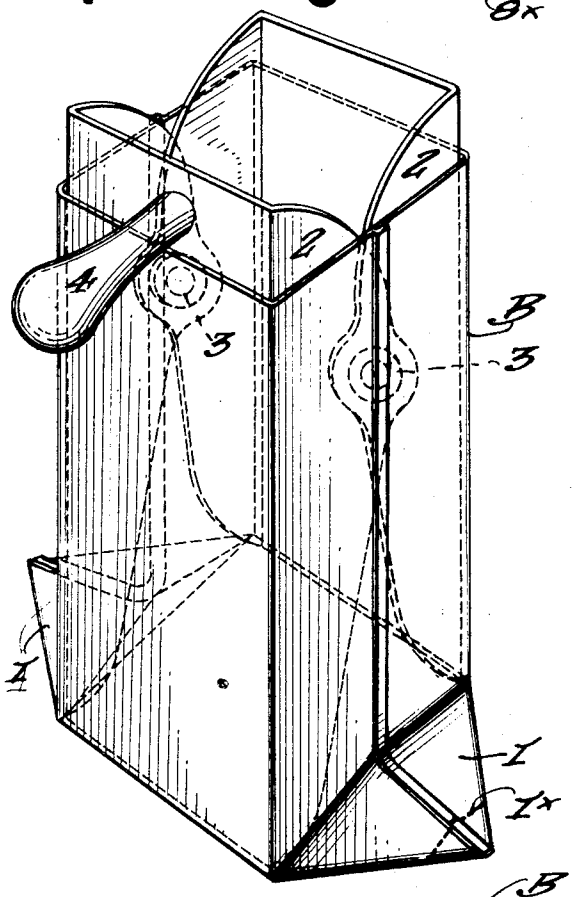
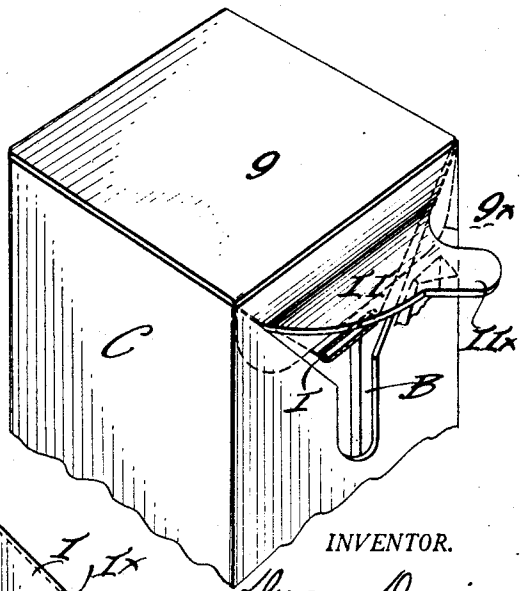


FIG. 9.



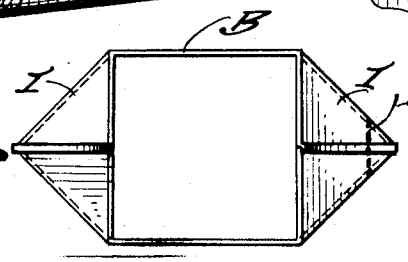


FIG. 8.

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UNITED STATES PATENT OFFICE

2,339,156

DISPENSING CONTAINER

Duane Davis, New York, N. Y., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Application May 28, 1942, Serial No. 444,784

3 Claims. (Cl. 229—7)

The object of the present invention is to provide a container particularly adapted for granular and powdered material and which provides a pouring spout, the container being very simple in construction and of low cost.

When an envelope-type of bag is formed by folding a sheet of paper upon itself and then cementing down the abutting margins of the two plys formed by the fold, a very simple bag construction is provided and one which embodies low cost of manufacture. When the bag is subjected to the action of a forming device and is brought up into rectangular form with a flat bottom, opposed triangular base wings are automatically formed either one of which may serve as an effective pouring spout. The present invention is characterized by the said principle.

The invention will be described with reference to the accompanying drawings, in which:

Figure 1 is a perspective view showing a sealed container, dotted lines bounding a tear flap.

Figure 2 is a view similar to Figure 1, showing the assembly with the tear flap removed.

Figure 3 is a perspective view showing the cover of the outer member of the assembly raised and the pouring spout of the bag or inner member sprung outwardly.

Figure 4 is a view similar to Figure 3, showing the end of the pouring spout torn away and the device ready for dispensing of its contents.

Figure 5 is a plan view showing the blank from which the outer member of the assembly, i. e., the carton, is formed.

Figure 6 is a perspective view showing the bag formed and ready for filling, with a forming device still in position within the bag.

Figure 7 is a perspective view showing the bag in closed position ready for insertion into an outer or carton enclosure when such an enclosure is used for the bag, the pouring flap being shown with a tear line and an adhesive spot below it.

Figure 8 is a plan view of the formed bag.

Figure 9 is a fragmentary perspective view illustrating the action of the carton tear flap upon the lower or tearing end of the pouring flap when the latter is secured by adhesive to the tear flap.

An envelope-type of bag is employed in the present construction. It is made up by folding a sheet transversely and at its center line whereupon the abutting side margins are secured together by any suitable adhesive material. The sheet may be of laminated material, if desired, and the construction of the sheet itself may be in accordance with a desired characteristic of the container. Thus if moisture-resistance is desired, the sheet may be made up of laminations comprising paper, metal foil, Pliofilm, or any two or more of these and other sheet material available for the purpose, and the paper may be surfaced or treated with moisture-resistant material, or strengthening material, such as asphalt, resins, either natural or synthetic. It will be seen, therefore, that while the bag is more particularly adapted for enclosing granular and powdered material, it may be readily adapted for holding liquid material.

The bag may be brought into rectangular cross section and with a flat bottom by inserting therein a suitable wedge-shaped former such as illustrated in Figure 6 of the drawings and then expanding the former to bring all four of its walls into vertical relationship, i. e., each pair of opposed side walls will be brought into parallelism. When this is done, horizontally projecting hollow flaps will be automatically formed at the base of the structure.

In Figure 6 the bag is indicated generally at B and each of the two hollow base flaps is shown at *f*. Any suitable forming device may be employed. That shown in Figure 6 consists of two trough-like members 2, each having its side walls tapering toward the base thereof in wedge formation, each pair of side walls being pivoted together at 3, the device being shown with an operating handle 4. When the former is placed in a bag and the handle 4 is raised, the bag will be expanded to the form shown in Figure 6. The bag may then be filled while the former is in place, and prior to such filling operation the bag may be placed within a protecting carton such as that indicated generally at C.

Prior to or after insertion of the filled bag into carton C, the open end thereof is closed as by folding inwardly the opposed side walls of the bag thus forming triangular flaps opposed to each other and lying at right angles to the folded-in side walls, which flaps may be folded in toward each other and at the top of the bag structure or reversely folded so as to lie against the sides of the bag as in Figure 7 at 5. If desired, a sealing strip 6 may be employed to hold together the folded-in side wall areas forming the bag closure.

The carton employed to receive and protect the bag may embody the blank form shown in Figure 5. The blank may be scored along the lines *s* to longitudinally bound the side walls. At the base of the blank are two closure lips 7 and a closure flap 8 formed with a tuck-in lip 8*x*. At the

opposite side of the blank are two closure lips 7x and a closure flap 9 having a tuck-in lip 9x. While such a carton is desirable the form of the carton may be widely varied from that just described.

The bag is filled from that end which will subsequently become its bottom, as will be noted from Figure 7, wherein the bag has been filled, closed, and inverted from its position in Figure 6. When the filled bag is placed in the carton one of the hollow flaps 1 will lie opposite a carton wall which by means of the cut scores or perforations at 10, Figure 1, is provided with a tear flap 11 having a finger-piece 11x. By pressing in the normally flexible wall of the carton adjacent the finger-piece, the latter will be free and may be grasped and pulled upwardly to detach the tear flap 11, thus exposing the said hollow flap 1, and when cover flap 9 is raised the normal resiliency of the flap 1 will tend to spring it back to its initial position shown in Figure 6 and in Figures 3 and 4. The end of the flap may then be torn away, as for example, on the cut score or perforated line 1x to provide a pouring spout.

When, after use, the carton is to be again closed, downward movement of cover flap 9 will cause its tuck-in lip 9x to engage flap 1 after which the tuck-in flap assumes position shown in Figure 2 to hold flap 1 inwardly against the bag.

When flap 1 is secured to tear flap 11 by adhesive, as, for example, by a spot of adhesive *a*, Figure 7, below the tear line 1x (Figure 7) the removal of the tear flap will also form the pouring spout provided by the bag hollow flap 1 by tearing away the end of the latter.

Having described my invention, what I claim and desire to secure by Letters Patent, is as follows:

1. A dispensing container comprising an envelope normally having an open top and a closed lower end, the envelope being distended into a rectangular structure in which side walls of the envelope form both the bottom wall of the rectangular structure and also opposed hollow triangular flap extensions adapted to be folded against side walls of the rectangular structure, one of the flaps being adapted for removal of an end section whereby the flap is adapted as a pouring spout, a carton enclosing the rectangular structure and provided with a tear flap lying opposite one of said hollow triangular flap extensions, the removal of the tear flap exposing said extension whereby the latter is permitted movement externally of the carton for action as a pouring spout, an end area of said hollow triangular flap extension being transversely weakened to provide a tear line, and means securing said weakened end area of the hollow triangular flap to the tearing flap whereby removal of the latter from the carton automatically removes the end of the hollow triangular flap, creating a pouring spout.

2. A dispensing container comprising an envelope normally having an open top and a closed lower end, the envelope being distended into a rectangular structure in which side walls of the envelope form both the bottom wall of the rectangular structure and also opposed hollow triangular flap extensions adapted to be folded against side walls of the rectangular structure, one of the flaps being adapted for removal of an end section, and a carton enclosing the rectangular structure and provided with a tear flap, the carton at one end being provided with a closure flap having a tuck-in lip normally lying in abutment with one of said hollow triangular flap extensions, said tuck-in lip having areas lying within the carton, the tear flap lying opposite said tuck-in lip so that when it is removed the tuck-in lip is exposed and may be raised to permit outward movement of said triangular flap extension in its use as a pouring spout, restoration of the tuck-in lip to initial position restoring the said triangular flap extension to initial position within the carton.

3. A dispensing container having at one end a hollow flap extension communicating with the interior of the container and adapted to be folded against a side wall of the container and a carton enclosing the container, said carton having a tear section lying opposite said hollow flap extension, said tear section being bounded by weakened lines, whereby removal of the tear section exposes the hollow flap extension, the flap extension near an end thereof is provided with a weakened line, the said flap extension outwardly of said weakened line being secured to the tear section of the carton whereby removal of said tear section automatically pulls out the flap extension and removes its end, adapting the extension as a pouring spout.

DUANE DAVIS.