June 25, 1935. J. SHAW 2,005,831

POURING CARTON

Filed April 9, 1934

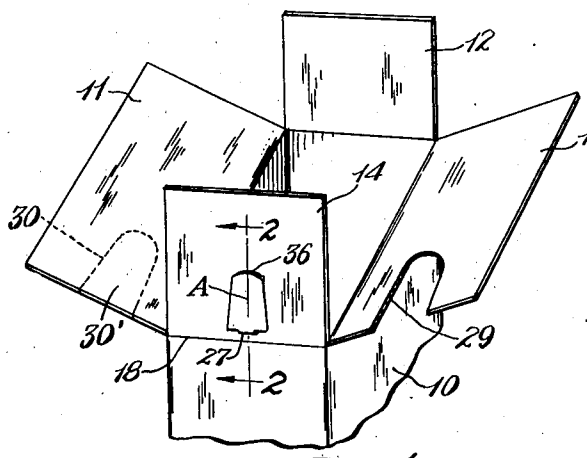


FIG. 1

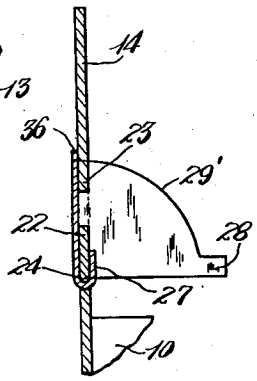


FIG. 2

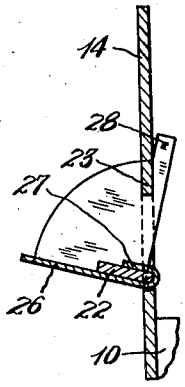


FIG. 3

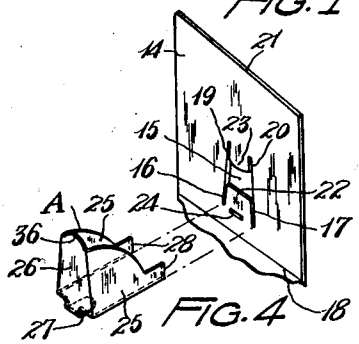


FIG. 4

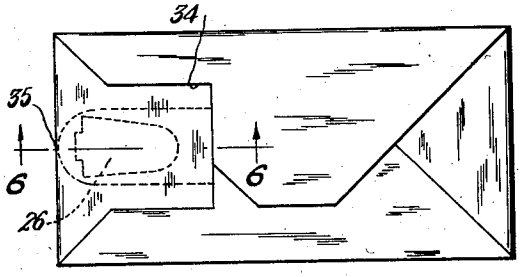


FIG. 5

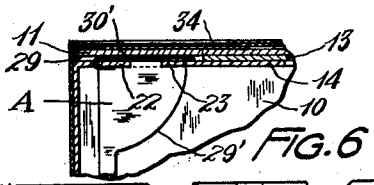


FIG. 6

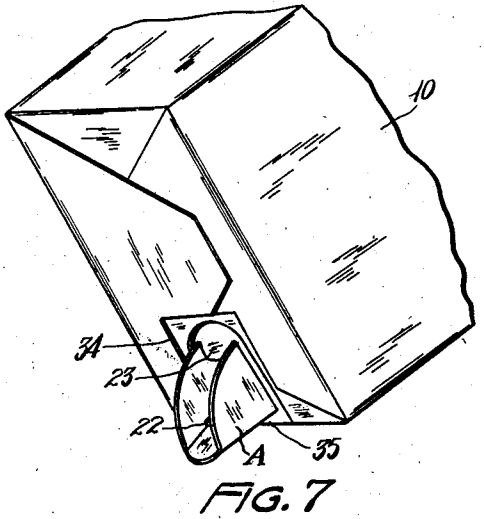


FIG. 7

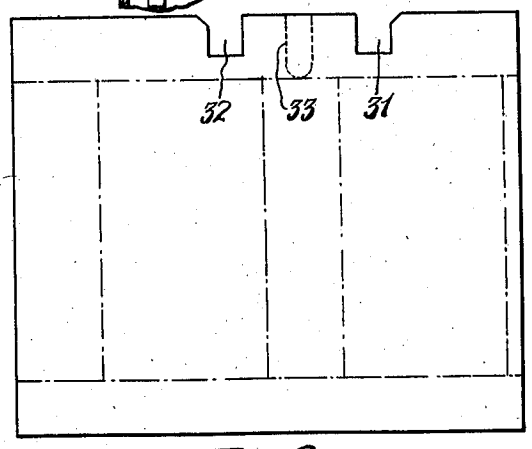


FIG. 8

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POURING CARTON

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Application April 9, 1934, Serial No. 719,639

4 Claims. (Cl. 221—11)

This invention relates to folding cartons for packaging granular materials and, more particularly, the invention relates to the provision of an improved form of pouring spout therefor.

It is one of the objects of the invention to provide a type of pouring carton that will be comparatively inexpensive to manufacture and having a spout that will be of substantial construction, convenient to operate, readily accessible, and which will not interfere with the sealing of the ends of the carton on the various types of automatic sealing machines that are now in use.

A further object of the invention is to provide a pouring carton that will be attractive in appearance and substantially leak-proof.

A further object of the invention is to provide a pouring carton that will be adapted to be enclosed in a so-called tight-wrapper without lessening the accessibility of the pouring spout or without sacrificing any of the desirable characteristics of the spout.

Other objects of the invention and the features of novelty will be apparent from the following description taken in connection with the accompanying drawing, of which

Figure 1 is a perspective view of the end portion of a carton embodying my invention, with the sealing flaps shown in open position;

Fig. 2 is an enlarged detail section on the line 2—2 of Fig. 1 and showing the manner of applying the spout to one of the flaps;

Fig. 3 is a view similar to Fig. 2 but showing the spout in open position;

Fig. 4 is a perspective view of the flap which carries the spout and the spout detached therefrom but in such relation thereto as to indicate the manner in which the spout is applied;

Fig. 5 is an end view of the sealed carton with the wrapper thereon;

Fig. 6 is a detail section on the line 6—6 of Fig. 5;

Fig. 7 is a perspective view of the end of the carton, with the spout in the open position, and illustrating the manner in which the spout is used; and

Fig. 8 is a plan view of the wrapper before being applied to the carton.

Referring to the drawing, 10 indicates the body of a common form of rectangular folding carton which is provided with the flap extensions 11, 12, 13 and 14 that are adapted to be folded into overlapping relation and glued together to form the end wall of the carton. The flaps 12 and 14 are the inner flaps and, in sealing the end of the carton, these flaps are first folded in so as to lie in the same plane. The intermediate flap 13 is then folded over the flaps 12 and 14 and glued thereto, and the outer flap 11 is then folded over the flap 13 and glued thereto.

As will be seen from Fig. 4, the inner flap 14 is provided with an opening 15 from which the pair of cuts 16 and 17 extend toward the fold-line or hinge 18, which constitutes the line of attachment of the flap to the body 10 of the carton. Another pair of cuts 19 and 20 extend from the opening 15 toward the free end 21 of the flap 14. The cuts 16 and 17 form a tongue 22 and the cuts 19 and 20 form a tongue 23, these tongues being in opposed relation on opposite sides of the opening 15. A small cut 24 is provided at the base of the tongue 22, for a purpose which will be later described.

A spout member indicated, generally, by the letter A is formed of sheet metal, such as aluminum, or of any other suitable material and comprises a pair of side walls or wings 25 and a connecting wall 26 which forms the bottom of the spout. There is a tang 27 on the wall 26 which is adapted to be inserted through the opening 24 and folded against the inner surface of the tongue 22 to secure the spout member thereto, as shown in Figs. 2 and 3.

The manner of attaching the spout to the flap 14 will be clear from Fig. 4 in which the spout is shown as detached from the flap but about to be applied. The wings 25 of the spout member are pressed through the cuts 16, 17, 19 and 20 until the wall 26 engages with the tongues 22 and 23. In thus applying the spout to the flap the tang 27 enters the cut 24 and when the wall 26 engages the tongues 22 and 23 the tang may be folded over, as shown in Figs. 2 and 3. The wings of the spout member have extensions 28 which, when the spout is open, as shown in Fig. 3, engage the inner surface of the flap 14 and thus limit the opening movement of the spout member. It will also be observed that the upper edges 29' of the side walls of the spout are curved on a radius which is substantially about the hinge line of the tongue 22.

The flap 13 is provided with an opening 29 which leaves the spout member exposed when the flap 13 is folded over and sealed against the flaps 12 and 14. The flap 11 has a line of perforations 30 which define a tear-out section 30' that is adapted to register with the opening 29 when the flap 11 is folded over and sealed to the flap 13.

Referring to Fig. 8, it will be seen that the

wrapper is provided with the substantially rectangular notches **31** and **32** as the portions thereof would otherwise overlie the spout member when the wrapper is secured in position on the carton. As shown in Figs. 5 and 7 the wrapper is also provided with a line of perforations **33** which register with the line of perforations **30**, in the flap **11**, when the wrapper is secured on the carton. The notches **31** and **32** form the rectangular opening **34** when the end portion of the wrapper is folded and sealed, as shown in Fig. 7.

In using my improved pouring carton the end thereof, which contains the pouring spout, is first sealed in the sealing machine and the carton is then filled and the four flaps at the opposite end of the carton are then folded in and sealed in the regular manner. The filled and sealed carton is then transferred to the wrapping machine and the wrapper applied thereto in the well-known manner. While the spout member A, when in its closed position, substantially seals the opening **15** in the flap **14** and prevents leakage of the contents, the package, as a whole, is rendered leak-proof by the use of the wrapper thereon. When it is desired to open the carton or remove any of the contents thereof, an opening is made at the point **35** by cutting the wrapper opposite the opening **29** by means of one's fingernail or a knife and the tear-out section **30'** is then removed so as to expose the wall **26** of the spout member. By the insertion of one's fingernail or a knife under the end **36** of the spout member, the latter may be swung to the open position as shown in Figs. 3 and 7. From Figs. 3 and 4 it will be noted that the tongue **23** is positioned between the side walls **25** of the spout and acts as a reinforcing spacer for these side walls when the spout is in the open position. Since the walls **25** of the spout member are thus supported and guided in the cuts **19** and **20**, the spout has a very substantial and durable connection between the tongue **22** and the flap is relieved of much of the stress that it would be otherwise subjected to in opening and closing the spout. After the package has been opened the spout may be readily opened and closed at will and, when in its closed position, it thoroughly seals the opening **15** so that the contents of the carton will be protected from contamination by foreign matter.

While I have illustrated and described what I now consider to be the preferred form of my invention, it will be understood that changes may be made in the details of the embodiment thereof which I have illustrated and described, without departing from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim:

1. In a folding carton having an end wall comprising an inner flap, an intermediate flap and an outer flap secured together in overlapping arrangement, said inner flap having an opening with two pairs of cuts extending therefrom and forming two opposed tongues, a spout member having side walls, extending through said cuts, and a wall which is attached to one of said tongues whereby the tongue functions as a hinge connection between the spout member and said inner flap, the last mentioned wall acting as a cover for said opening when the spout member is in its closed position, said intermediate flap being provided with an opening through which the spout member is adapted to be moved to and from its closed position, and said outer flap being provided with a tear-out portion overlying and normally concealing the spout member but which upon removal forms an opening in the outer flap through which the spout member is accessible.

2. In a folding carton having an end wall comprising an inner flap, an intermediate flap and an outer flap secured together in overlapping arrangement, said inner flap having an opening with two pairs of cuts extending therefrom and forming two opposed tongues, a spout member having side walls, extending through said cuts, and a wall which is provided with a tang for attaching the spout member to one of said tongues whereby the tongue functions as a hinge between the spout member and said inner flap, the last mentioned wall acting as a cover for said opening when the spout member is in its closed position, said intermediate flap being provided with an opening through which the spout member is adapted to be opened and closed, said outer flap having a tear-out portion overlying and normally concealing said spout member but which, upon removal, forms an opening in the outer flap through which the spout member is accessible, and a wrapper glued to the outer surface of the carton for sealing all joints therein and having a tear-out portion overlying and secured to said tear-out portion of said outer flap.

3. In a folding carton having an end wall comprising an inner flap, an intermediate flap and an outer flap secured together in overlapping arrangement, said inner flap having an opening and a pair of cuts extending therefrom toward the hinged edge of the flap and forming a tongue, a spout member having side walls, extending through said cuts, and a wall which overlies and is secured to said tongue whereby the tongue functions as a hinge connection between the spout member and said inner flap, the last mentioned wall acting as a cover for said opening when the spout member is in its closed position, said intermediate flap having an opening through which the spout member is accessible, said outer flap having a tear-out portion overlying the last mentioned opening, and the side walls of the spout member having extensions adapted to engage the inner side of the inner flap to limit the opening movement of said member.

4. A folding carton having an end wall comprising a plurality of overlapping flaps which are secured together, one of said flaps having a pouring spout therein, the outer of said flaps having a tear-out section overlying said pouring spout, and a wrapper secured on the exterior of the carton and having folded end portions overlying said outer flap and secured thereto, said wrapper having a tear-out section which registers with and is secured to the first mentioned tear-out section, and said folded end portions of the wrapper being provided with notches in the edge thereof which outline an opening in said folded portions whereby said tear-out section may be removed without disturbing said folded portions.

JAMES SHAW.