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CARTON WITH INTEGRAL POURING SPOUT AND BLANK THEREFOR

Filed July 24, 1957

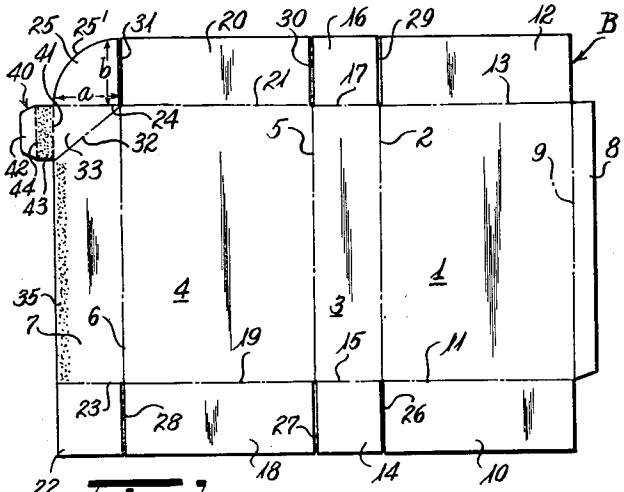


Fig. 1.

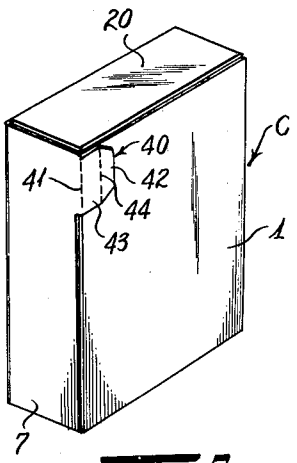


Fig. 2.

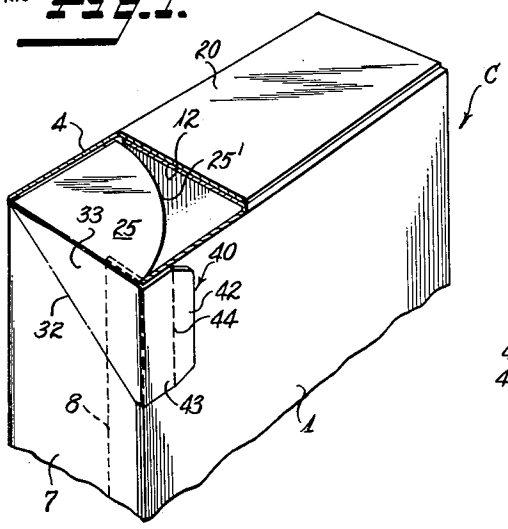


Fig. 3.

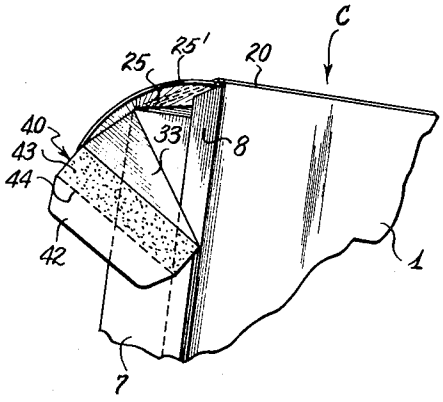


Fig. 4.

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2 Claims. (Cl. 229—17)

This invention relates in general to a novel carton structure comprising an integral pouring spout, and to a blank for forming said carton.

A primary object of the invention is to provide a carton having an integral pouring spout which in its assembled form is sealed in closed position, but which may be readily unsealed and adjusted to pouring position.

Another primary object is to provide a carton having a pouring spout which is firmly retained in adjusted position and which will not become disassembled in normal use.

A further object is to provide a carton having a pouring spout which may be readily manipulated between open and closed position, and which is guided so it will not assume an undesirable position within the carton.

A still further object is to provide a carton having an integral pouring spout formed in a relatively narrow end wall thereof and arranged to effect pouring in a direction substantially parallel to the plane of the wall so that the pourer may readily view the contents being poured.

Other objects and advantages will be apparent from the following description taken in conjunction with the accompanying drawings in which:

Fig. 1 is a plan view of a blank embodying the principles of the present invention;

Fig. 2 is a perspective view showing a carton constructed and assembled in accordance with the principles of the invention;

Fig. 3 is a fragmentary, perspective view similar to Fig. 2 with certain parts thereof being broken away to disclose details of construction; and

Fig. 4 is a fragmentary perspective view of the carton shown in Fig. 2 disclosing the spout in pouring position.

Referring now in detail to the drawings, the carton generally indicated by the letter C, is formed from a blank B having four panels disposed in side-by-side relation and adapted to form the walls thereof. The front wall panel 1 is connected along a fold line 2 to a first end wall panel 3. A back wall panel 4 is connected along a fold line 5 to panel 3 and is connected at its opposite side edge along a fold line 6 to a second end wall panel 7.

Lower flaps 10, 14, 18 and 22 are connected to the bottom edges of panels 1, 3, 4 and 7, respectively, along fold lines 11, 15, 19 and 23, and are separated by longitudinal slits 26, 27 and 28. Similarly, upper flaps 12, 16 and 20 and spout portion 25 are connected to the top edges of panels 1, 3, 4 and 7, respectively, along fold lines 13, 17, 21 and 24, and are separated by longitudinal slits 29, 30 and 31. Spout portion 25 is equal in height to upper flaps 12, 16 and 20, but whereas they are generally rectangular in shape, spout portion 25 is provided with an arcuate outer edge 25'. It is preferable that the width *a* of the end wall panel 7 be equal to the height *b* of spout portion 25 and that the edge 25' lie on an arc having the intersection of fold line 24 and slit 31 as its center, its radius being equal to the

aforementioned dimensions *a* and *b*. It is, of course, desirable that the distance between any point along the edge 25' (at least that part of the edge which will be exposed when the triangular flap is lifted) and the point of intersection of the fold lines 24 and 32 should not exceed the dimension *a* (that is, the length of the fold line 24).

A diagonal fold line 32 extends from the bottom of slit 31 across the end wall panel 7 at an angle of less than 45° from fold line 24 to define another spout portion 33. The end wall panel 7 also includes an adhesivized area 35 extending along the free edge thereof for a width corresponding generally to that of the connecting flap 8, the adhesivized portion terminating below fold line 32.

In assembly, the wall panels 1, 3, 4 and 7 are folded over at right angles to each other along the respective fold lines 2, 5 and 6 to form a generally rectangular structure. The connecting flap 8 is folded along fold line 9 being secured under end wall 7 by means of adhesivized portion 35 to maintain the structure in assembled form. Flaps 14 and 22 are folded inwardly and flaps 10 and 18 are in turn folded thereover to form a bottom. Similarly, flap 16 and spout portion 25 are folded inwardly and flaps 12 and 20 folded thereover, in turn, to form a top for the carton. Lower flaps 10, 14, 18 and 22 and upper flaps 12, 16 and 20 are maintained in assembled relation by suitable adhesive means (not shown). A sealing tab 40 is connected along a longitudinal line of perforation 41 to the free edge of end wall panel 7 between fold line 24 and diagonal fold line 32. The tab 40 is divided into two sections, 42 and 43, by a second longitudinal line of perforation 44, and adhesive may be applied to section 43.

To seal the pouring spout in closed position, tab 40 is folded, at perforated line 41, over the outside of front wall panel 1 and secured in position by an adhesive applied to tab section 43 thereof. Thus, in use the carton spout may be unsealed by grasping portion 42 of tab 40 and tearing said tab away from the front wall panel 1. Subsequently, the tab 40 may be employed to fold portion 33 outwardly along fold line 32. Spout portion 25, being slidably mounted under the top of the carton and above flap 8, is pulled outwardly by spout portion 33 to whatever degree of opening is desired. The sliding movement of spout portion 25 is guided between flap 8 and the carton top and thus kept in flat relation to the carton top in all positions. Once the spout is adjusted to the desired position these elements serve to grip the spout portion 25 and hold it against slippage (see Fig. 4). Also tending to hold the spout portion 25 in adjusted position is the configuration of arcuate edge 25' which in all positions of adjustment fits closely against the inside of front wall panel 1. The spout may be readily returned to closed position when not in use and is retained in closed position by the same means.

Once the carton is unsealed, tab portion 42 or the entire tab 40 may be detached along the perforated lines provided.

It is further to be noted that since diagonal fold line 32 is formed at an angle of less than 45° from fold line 24, spout portion 25 will not be pulled out from under the carton top in normal use. The spout portion 33 may be folded back until it lies along the outside of end wall 7 without causing the spout portion 25 to be pulled out from under the top.

It will thus be seen that the invention described herein is well adapted to obtain those objectives stated heretofore and those implicit in the above description. It will be understood that numerous changes and modifications in structure and configuration of the carton disclosed may

be made without departing from the principles of the invention or the scope of the annexed claims.

I claim:

1. A carton made from a blank and comprising three walls defining a corner of the carton, a triangular flap forming part of one wall and defined in part by two angularly disposed score lines, one a diagonal score line which extends between two edges of the wall of which the triangular flap forms a part and the other a score line which extends along one of the edges of the corner, the diagonal score line serving as a pivot for the triangular flap when the triangular flap is lifted to expose a pour opening at the corner of the carton, a spout flap connected to the triangular flap by said score line extending along the edge, said spout flap underlying one of the walls defining the corner when the triangular flap lies in the plane of its respective wall, a pull tab connected to the triangular flap for pivoting it about the diagonal score line to pull the spout flap from its position underlying one of the walls, the exposed portion of the spout flap having a curve imparted to it as the triangular flap is pivoted further outwardly about the diagonal score line, whereby the triangular flap and the exposed curved portion of the spout flap cooperate to define a pouring spout for a pour opening in the carton exposed by the triangular flap, and means internally of the carton and supported by one of the walls so as to underlie the spout flap to define a slit for guiding the spout flap therein and maintain it in closely-spaced relation with the wall which the spout flap underlies.

2. A carton as set forth in claim 1 including a score line separating the pull tab and the triangular flap to permit the pull tab to lie against a wall of the carton other than the wall of which the triangular flap forms a part and means for attaching the pull tab to said other wall of the carton to maintain the pour opening closed before the carton is opened.

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