Dec. 4, 1945. A. ROUS 2,390,392

CARTON AND CARTON BLANK

Filed April 7, 1944

FIG. 1

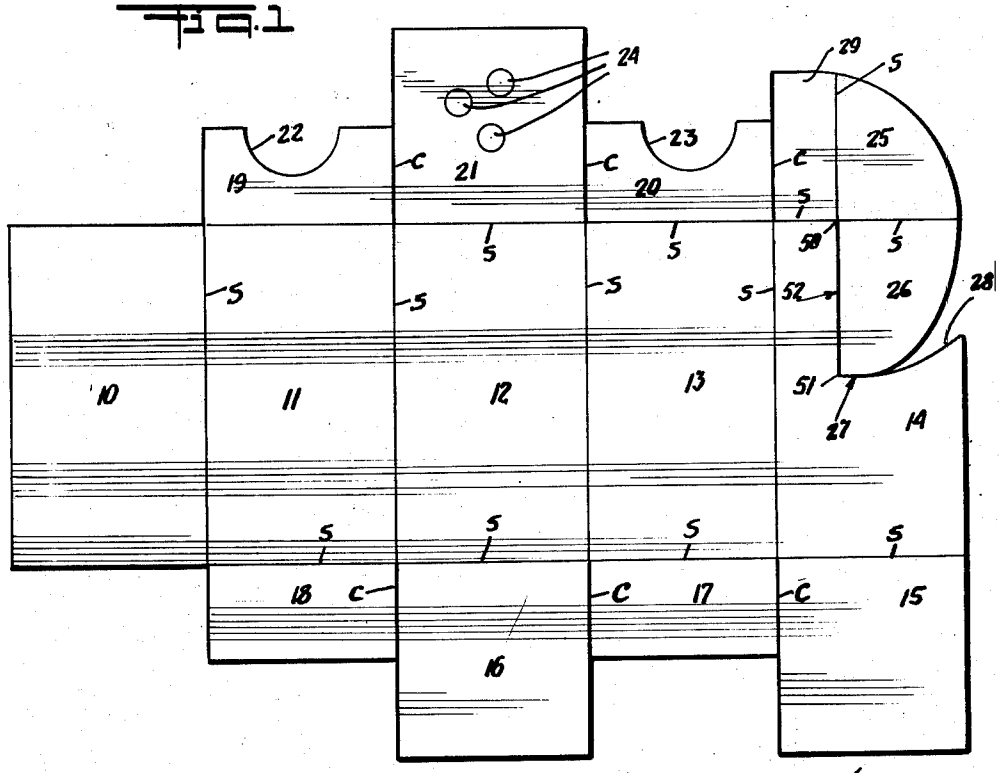


FIG. 2

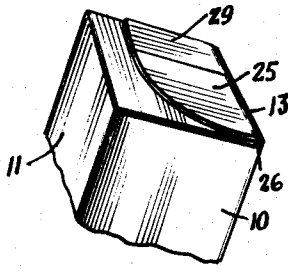


FIG. 3

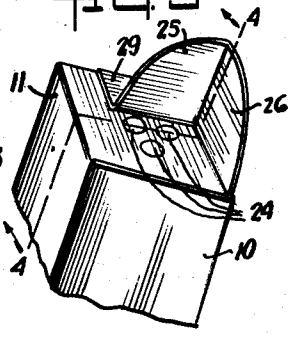


FIG. 4

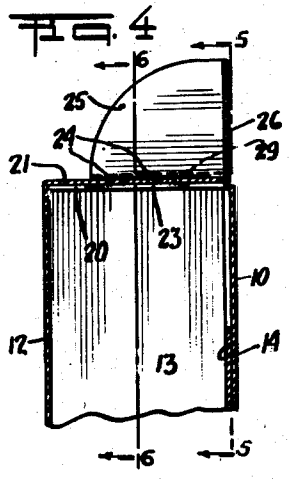


FIG. 5

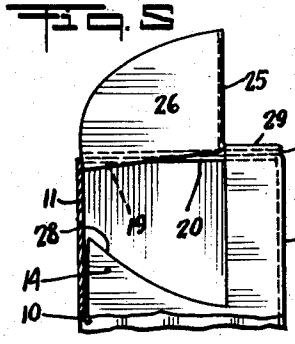
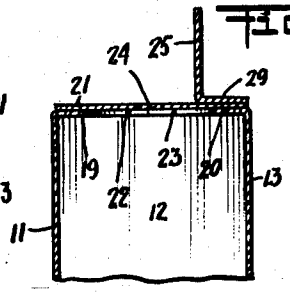


FIG. 6



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CARTON AND CARTON BLANK

Arthur Rous, New York, N. Y.

Application April 7, 1944, Serial No. 530,033

2 Claims. (Cl. 229—17)

My invention relates to a new improved box or carton, and to an improved blank for making said carton.

The principal objects of my invention are to provide a carton which has a pouring opening or openings and an improved spout-gate for said pouring opening or openings, and which can be readily manufactured at low cost from a single flat blank.

Other objects of my invention will be stated in the annexed description and drawing, which illustrate a preferred embodiment thereof.

Fig. 1 is a plan view of the flat blank from which the carton or box is assembled. This drawing is to scale, and reference is made thereto for various details.

Fig. 2 is a perspective view of the top portion of the box or carton, with the spout-gate in the closed position.

Fig. 3 is a view, similar to Fig. 2, with the spout-gate in the open position.

Fig. 4 is a sectional view on the line 4—4 of Fig. 3.

Fig. 5 is a sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a sectional view on the line 6—6 of Fig. 4.

The body of the carton is provided with an external front wall 10, an internal front wall or flap 14, a rear wall 12, and side walls 11 and 13.

The blank is scored along the lines *s* and it is cut through-and-through along the cut-lines *c*. The blank and the carton have a longitudinal axis, which is vertical in Fig. 1.

The internal front wall 14 is provided with an additional longitudinal cut-line 52, which extends between the points 50 and 51. A flap 26 is thus provided from the material of the internal front wall 14. Said flap 26 is integral with a flap 25, which is connected to flap 26 along a respective lateral score line *s*. Said flap 25 is connected to the top flap 29, which is integral with the internal front wall 14, along a longitudinal score line *s*. The internal front wall 14 is also provided with a re-entrant top edge which has a curved portion 28 and which has a substantially straight and lateral portion 27. A part of the edge of the flap 26 also has a straight portion which abuts the straight and lateral edge-portion 27.

The rear wall 12 is provided with a bottom flap 16 and with a top flap 21. Said top flap 21 is provided with a plurality of dispensing perforations 24 which may be closed by removable closures when the blank is made. The material of flap 21 can be scored at the edges of said perforations 24, thus providing easily removable closures for said perforations.

The side wall 13 has a top flap 20 whose free edge has a recess 23. Said side wall 13 also has a bottom rectangular flap 17.

The side wall 11 has a top flap 19 which has a recess 22, and said side wall 11 also has a bottom flap 18. The flaps 17 and 18 are identical, and the flaps 19 and 20 are identical.

In the assembled box, the internal front 14 is connected to the inner face of the external front wall 10, only by a narrow area of adhesive which is located at the free edge of the inner face of the external wall 10. The width of said area of adhesive does not exceed the width of the space between the longitudinal cut-line 52 and the next adjacent longitudinal vertical score line *s*. Hence, in the assembled carton, the flap 26 is freely movable relative to walls 10 and 14, when the flap 25 is turned along the respective score line *s* along which said flap 25 is hingedly connected to flap 29. The wall 14 is designated as a closure supporting body-wall, because the flap 25 is connected to said wall 14 through flap 29. In the blank, said wall 14 has a free longitudinal edge.

In order to form the bottom end-wall of the box, the flaps 17 and 18 are bent inwardly and the walls 11 and 13 are bent relative to wall 12, so that the free edges of said flaps 17 and 18 either abut each other or overlie each other. The flap 15 is then bent inwardly after wall 14 has been turned to its final position. The flap 16 is then bent inwardly and it is connected to flap 15 by adhesive or in any other suitable manner.

The flaps 19 and 20 are then bent inwardly at the top of the box, so that their recesses 22 and 23 provide a dispensing or pouring opening.

The flap 21 is then bent inwardly, and it is connected to the flaps 19 and 20 by suitable adhesive.

The pouring or dispensing perforations 24 of the flap 21 then register with the opening which is provided by the recesses 22 and 23. The flap 29 is then bent inwardly, and it is adhesively secured to the respective part of the flap 21, so that the flap 25 remains freely turnable relative to the flap 21.

In order to dispense the contents of the box, the flap 25 is turned to the open position of Fig. 3, and the closures of openings 24 are removed.

The flaps 25 and 26 then provide a spout or trough, which facilitates the pouring of the material.

When flaps 25 and 26 are turned to the closing position of Fig. 2, flap 26 is subjected to sufficient friction to hold it in place.

The flap 25 is designated as the closure flap, and the flap 26 is designated as the supplemental flap.

The flap 29 overlies and it is fixed to the imperforate portion of the perforated pouring end-wall. The supplemental flap 26 is located slidably between said pouring end-wall and one of the body-walls of the body of the carton. The supplemental flap 26 remains thus located, when the closure flap 25 has been turned outwardly to its maximum extent.

When the flap 25 is in the closing position, an edge of the supplemental flap 26 abuts the intermediate longitudinal edge of the body-wall 14 which is provided by the cut-line 52.

The entire reentrant edge 28 can be concave, so that the tip of the supplemental flap 26 only makes a point of contact with edge 28 when flap 26 is in its closed position. The flattened shape of said tip at 27 helps to keep flap 26 in closed position.

I have shown a preferred embodiment of my invention, but it is clear that numerous changes and omissions and additions can be made without departing from its spirit.

When I refer to a pouring end-wall which is perforated, I include an end-wall whose perforations are closed by removable closures.

The top face of flap 15 can be adhesively connected to the bottom faces of flaps 17 and 18. The score lines s function as hinge lines, at which the respective parts are hingedly connected to each other. The flap 21 is designated as a perforated flap, which has one or more perforations 24, even though such perforations are closed in the blank by removable closures.

I claim:

1. A carton blank which has a longitudinal axis, said blank having body-walls which are bendable, relative to each other along longitudinal hinge-lines to provide the body-walls of the body of the assembled carton, one of said body-walls being a closure-supporting wall, said closure-supporting wall having a free edge in the blank, said closure-supporting wall having a lateral reentrant edge which extends inwardly from said free edge, a lateral edge of said closure-supporting wall having a connecting flap turnably connected thereto at a lateral hinge-line, said connecting flap having a closure-flap turnably connected thereto at a longitudinal hinge-line, said closure-flap having a free edge in the blank, said closure-supporting wall being cut along a longitudinal cut-line which is coincident with said longitudinal hinge-line to provide a supplemental flap which is longitudinally alined with said closure-flap, said supplemental flap being bendable relative to said closure flap at said lateral hinge-line, said body walls other than said closure-supporting wall having end flaps which are laterally alined with said connecting flap, said end flaps being perforated and being inwardly bendable along said lateral hinge-line to provide a perforated pouring end-wall for the assembled carton, said connecting flap being adapted to overlie and to be connected to the outermost end flap of said pouring end-wall of the assembled carton, said closure-flap being dimensioned to overlie the outlet opening of said pouring end-wall of the assembled carton, said supplemental flap being shaped to be movable relative to said closure-supporting wall when said closure-flap is bent outwardly.

2. A carton which has a body, said body having body-walls, said body also having a top pouring end-wall which has a perforation and an imperforate part, one of said body-walls being a closure-supporting-wall, said closure-supporting-wall being located inwardly of another body-wall, said closure-supporting-wall having opposed longitudinal edges, one of said longitudinal edges being a free longitudinal edge of said closure-supporting wall, said closure-supporting-wall being cut along a concave laterally inward cut-line which extends laterally inwardly from said free longitudinal edge between the top and bottom of said free longitudinal edge, said closure-supporting wall being also cut longitudinally along a longitudinal cut-line which extends downwardly from the top lateral edge of said closure-supporting-wall and which joins said concave cut-line, said cut-lines defining a supporting flap which is turnably fixed to said closure-supporting-wall at a part of said top lateral edge, said closure-supporting-wall having a top flap, said top flap being scored along a score line which is perpendicular to said top lateral edge and which joins said longitudinal cut-line, said score line providing a closure flap which is integral with said supporting flap, said closure flap constituting a portion of said top flap, the remaining portion of said top flap being fixed to the imperforate part of said pouring end-wall, said supporting flap having a free edge which is shaped to permit said supporting flap to be moved longitudinally to-and-fro relative to said body, said closure flap being movable in unison with said supporting flap to and out of a closing position in which said closure flap overlies and closes said perforation.

ARTHUR ROUS.