Sept. 26, 1950 A. READ 2,523,668

CARTON

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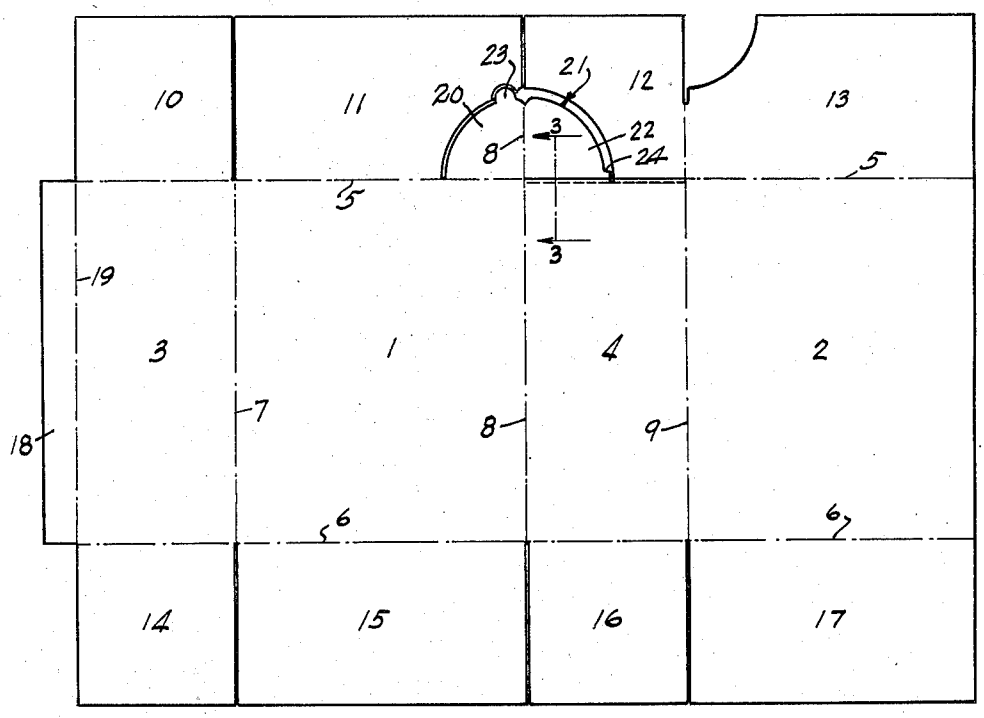


Fig. 1

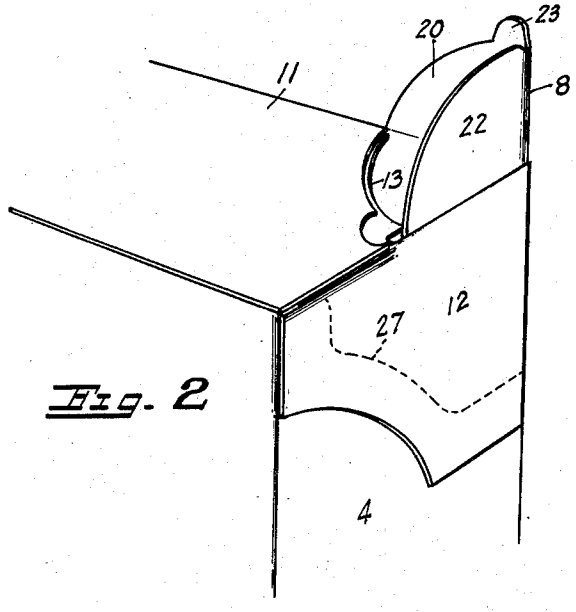


Fig. 2

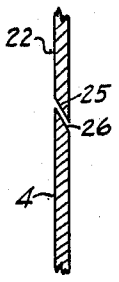


Fig. 3

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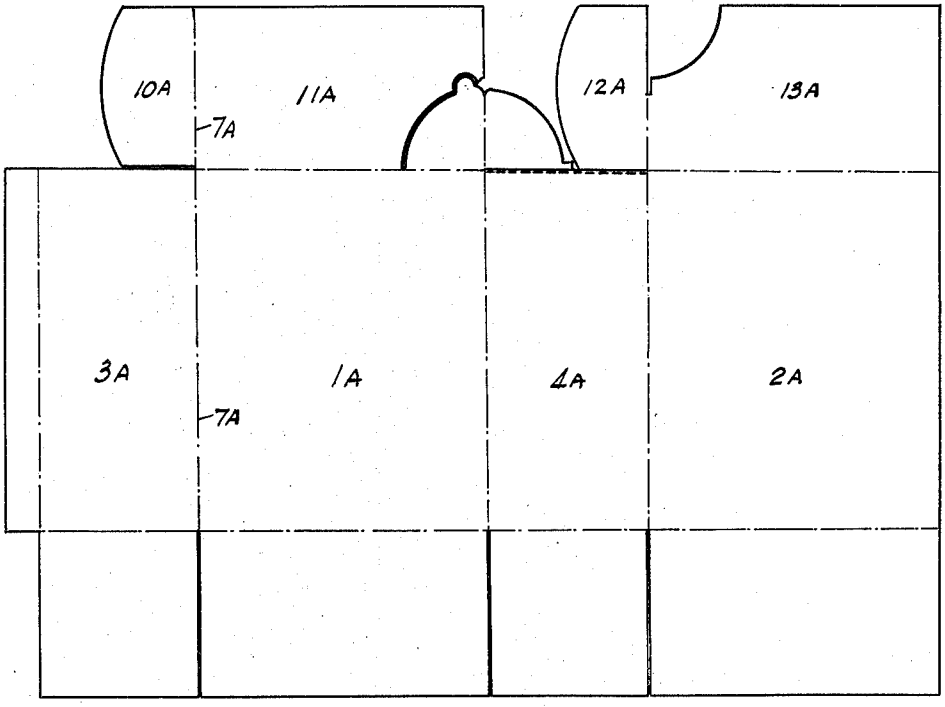


Fig. 4

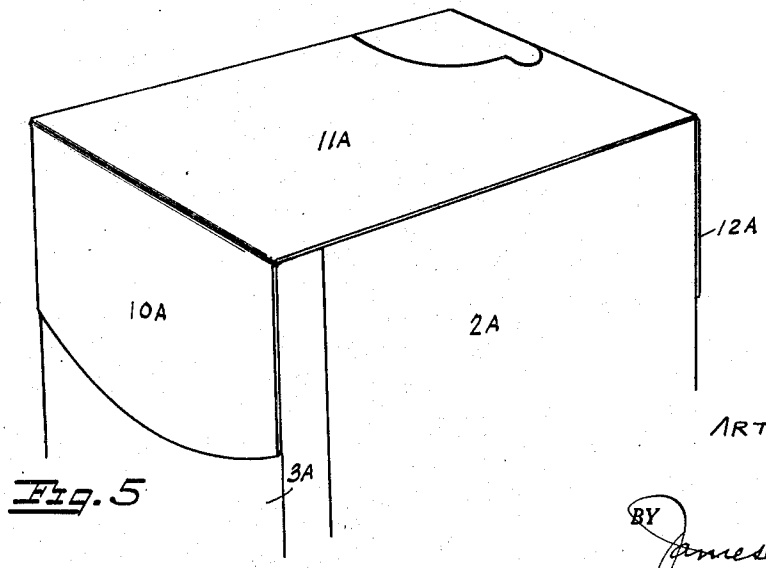


Fig. 5

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Patented Sept. 26, 1950

2,523,668

UNITED STATES PATENT OFFICE

2,523,668

CARTON

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Application September 15, 1947, Serial No. 774,145

2 Claims. (Cl. 229—17)

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This invention relates to improvements in cartons and more particularly to a pouring spout built into the carton as an integral part thereof.

One of the principal objects of the invention is the provision of a combination carton and pouring spout which may be formed by a simple cutting and scoring operation from a single piece of blank material of square or rectangular shape whose entire area is utilized and whereby a maximum number of blanks may be cut from a supply sheet with minimum waste.

Another important object is the provision of a pouring spout as above pointed out which may be securely locked against unintentional opening or closing and which is sealed when in a closed position.

A further object is the provision of means for stabilizing the spout throughout its operative range from opened to closed positions, and said means providing a protective covering for one wall of the spout.

These and other objects will appear as my invention is more fully hereinafter described in the following specification, illustrated in the accompanying drawings, and finally pointed out in the appended claims.

In the drawings:

Figure 1 is a plan view of sheet of blank carton material cut and scored for folding into a combination carton and pouring spout in accordance with my invention.

Figure 2 is a slightly enlarged fragmentary perspective view of the folded carton showing the pouring spout in an open position.

Figure 3 is an enlarged sectional view taken along the line 3—3 of Figure 1.

Figure 4 is a plan view of a sheet of blank carton material cut and scored to form a carton in accordance with a modified form of the invention.

Figure 5 is an enlarged fragmentary perspective view of the modified form of the carton.

In Figure 1 reference numerals 1 and 2 indicate front and rear walls, respectively, of a carton, and 3 and 4 the side walls thereof. These walls or panels are defined by longitudinal score lines 5 and 6 and transverse score lines 7, 8 and 9.

The top wall of the carton is formed by end flaps 10, 11, 12, and 13, and the bottom wall is formed by similar flaps 14, 15, 16, and 17. All of said flaps are folded over on themselves about their respective fold lines in overlapping relation and secured to each other by any suitable adhesive.

An auxiliary flap 18 is formed integral with

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the side wall 3 and is foldable about a score line 19 for securing said side wall 3 to the wall 2 when assembling the carton into final folded form.

Formed integral with the panel or wall 1 at its upper edge and foldable about the fold line 5 is one wall 20 of the pouring spout generally indicated at 21 whose opposite wall 22 is foldable about a continuation of the fold line 8 so that the spout will assume the shape illustrated in Figure 2. The fold line 5 forms a hinge for swinging the spout into open or closed positions to be hereinafter more fully described. The upper end of the wall 20 of the spout is formed with a lifting tab 23 for convenience in manipulating the spout. The lowermost outer corner of the wall 22 is formed with a projection 24 to serve as a limit-stop for the opening of the spout as it engages beneath the top end flap 13.

As shown in Figure 3, the lowermost edge of the wall 22 of the pouring spout and the uppermost edge of the side wall 4 are tapered outwardly as indicated at 25 and 26, respectively, for the purpose of guiding the wall of the pouring spout to its proper location in a closed position.

The carton is folded into final form in the following manner: To form the box or carton portion, the side wall 4 is folded about the fold line 9 to a position at right angles to the rear wall 2. The front wall 1 is then folded around the fold line 8 to a position parallel to the wall 2. Following this the other side wall 3 is folded about the fold line 7 to a position at right angles to the front wall 2 which places the fold line 19 adjacent the outermost edge of the rear wall 2. Following this the auxiliary flap 18 is folded about the line 19 to overlap the marginal edge of the wall 2 to which it is secured by an adhesive.

To form the bottom wall, I first fold the flap 15 inwardly about the fold line 6 and then the flaps 14 and 16 about said fold line to bear against the flap 15. The flap 17 is then folded to overlap the flaps 14 and 16. All of said bottom flaps are joined together by an adhesive in any approved manner. In forming the top end wall and the pouring spout therein, I first fold the wall 22 of the spout about the fold line 8 into a position at right angles to the wall 20 to complete the pouring spout. Following this, I fold the flap 13 inwardly about the fold line 5 at right angles to the front wall, 1, then the flap 10 about said fold line to overlap and to be secured to the flap 13. I then fold the flap 11 about the fold line 5 and secure it to the top side of the flap 13. Moving the flap 13 into this position places

the flap 12 in a horizontal position at right angles to the rear wall 2 and extends it outwardly therefrom. From this position the flap 12 is moved downwardly into contact with and is secured to the end wall 4 as best illustrated in Figure 2. This flap is secured to the wall 4 only about its marginal edges by an adhesive within an approximate area defined by the dotted line 27, thus, the unattached portion of the flap forms a slot between itself and the wall 4 of the carton to receive the wall 22 of the pouring spout when in a closed position. This slot not only stabilizes the spout in any position but also prevents the contents of the carton from finding its way between the outside surface of the wall 22 and the inside of the wall 4 if said wall were disposed on the inside of the side wall 4. This feature would be particularly advantageous in milk cartons as well as cartons for other liquids. In folding the carton into final form the tapered edges 25 and 26 of the spout wall 22 and the side wall 4 serve as a guide in directing the wall of the spout into said slot between the flap 12 and the wall 4. The wall of the spout automatically enters the slot as the spout is moved into position.

In Figure 4, the end flap 10A is hinged along a continuation of a fold line 7A, and the flap 12A is folded the same as the flap 12 in Figure 1, but is cut away as shown to correspond to the shape of the flap 10A.

In folding this modified form of the carton the walls 3A, 1A, 4A, and 2A are folded the same as those shown in Figure 1. The upper end flaps, however, are secured together by first folding the flap 13A downwardly then the flap 11A downwardly to be secured to the flap 13A, while the flaps 10A and 12A are folded downwardly to overlap and to be secured to the outside of the walls 4A and 3A. By securing said end flaps to the outside of the walls, I reinforce both of the upper ends of the carton, which are normally gripped by a user. The flap 12A, of course, forms a slot, as in the form shown in Figure 1, to receive one wall of the pouring spout.

While I have shown a particular form of embodiment, of my invention, I am aware that many minor changes therein will readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention. Having thus described the invention, what I claim as new and desire to protect by Letters Patent is:

1. A combination carton and pouring spout comprising a blank piece of material formed with longitudinal and transverse fold lines to define respectively, a plurality of flaps to be joined together in overlapping relation to form end walls and front, rear and side walls of single thickness, two of said flaps being formed with adjacent cut-out portions to form a pouring spout consisting of two walls foldable about a central fold line, one wall of the spout being formed integral with one wall of the carton and movable about a fold line at one edge thereof to form a hinge, one of said two of said flaps being formed as an extension of one of said plurality of flaps and folded at right angles thereto and being secured around certain of its marginal edges to the outside of one single side wall of the carton to form a slot between itself and said single side wall to receive one wall of said spout when the spout is moved into a closed position.

2. A combination carton and pouring spout comprising a blank piece of material formed with longitudinal and transverse fold lines to define respectively, two flaps to be joined together in overlapping relation to form an end wall of double thickness and front, rear and side walls of single thickness, said two flaps being formed with adjacent cut-out portions to form a pouring spout consisting of two walls foldable about a central fold line, one wall of the spout being formed integral with one wall of the carton and movable about a fold line at one edge thereof to form a hinge, an extension formed integral with each of said flaps and bent at right angles thereto and secured to adjacent side walls of the carton, one of said extensions being secured around its marginal edges to one of said side walls to form a slot between itself and the adjacent wall of the carton to receive one wall of said spout when the spout is moved into a closed position, and the upper edge of said last mentioned wall of the carton and the lowermost edge of said other wall of said spout being correspondingly tapered to direct said last mentioned wall of the spout into said slot when the carton is being folded into final form.

ARTHUR READ.

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