Dec. 5, 1944. O. H. HULTIN 2,364,364

PACKAGE

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Fig. 1

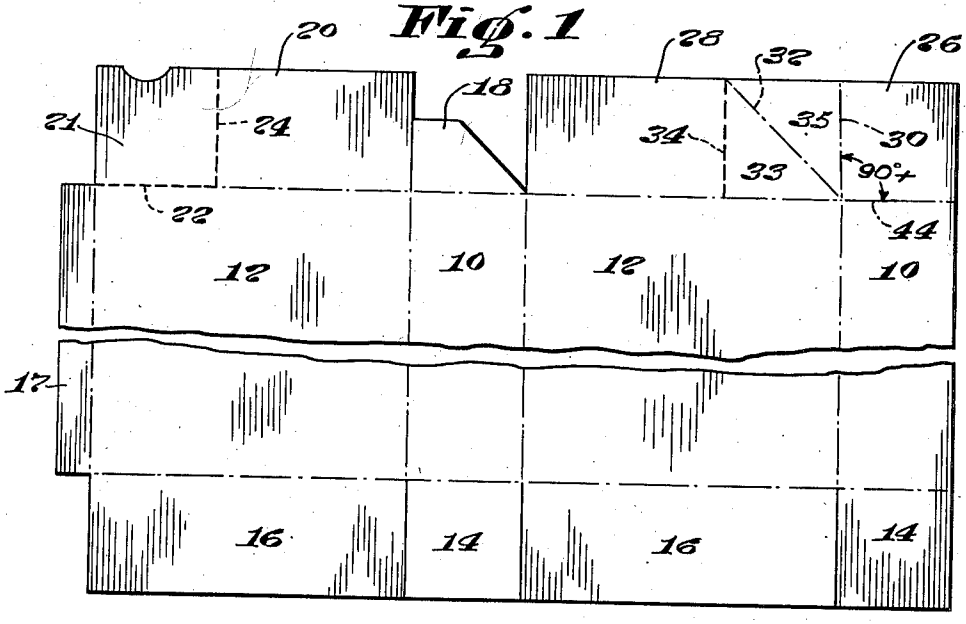


Fig. 2

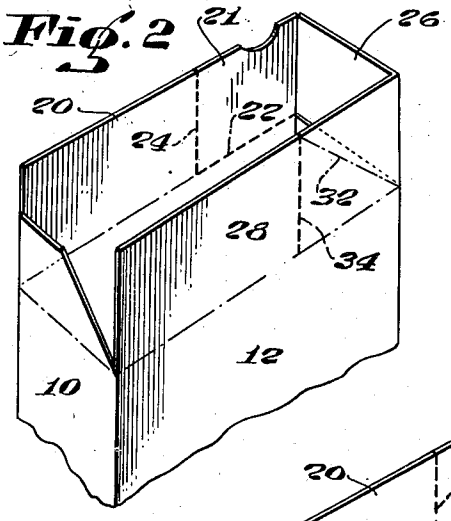


Fig. 4

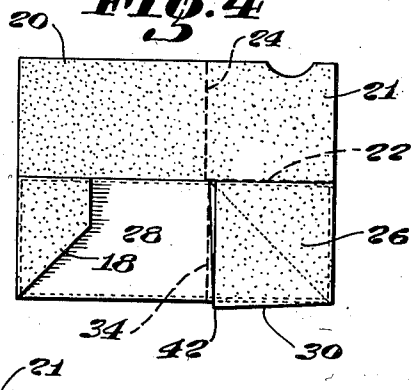
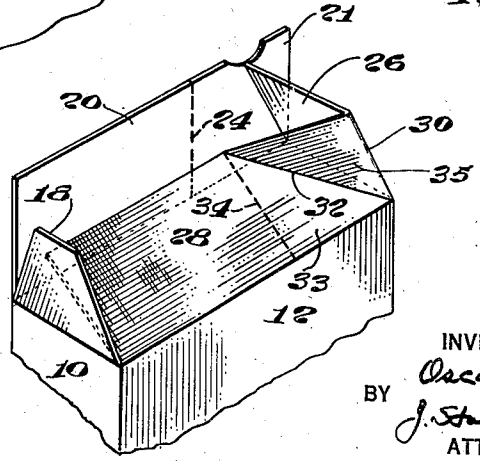


Fig. 3



INVENTOR
Oscar H. Hultin
BY
J. Stanley Churchill
ATTORNEY

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Fig. 5

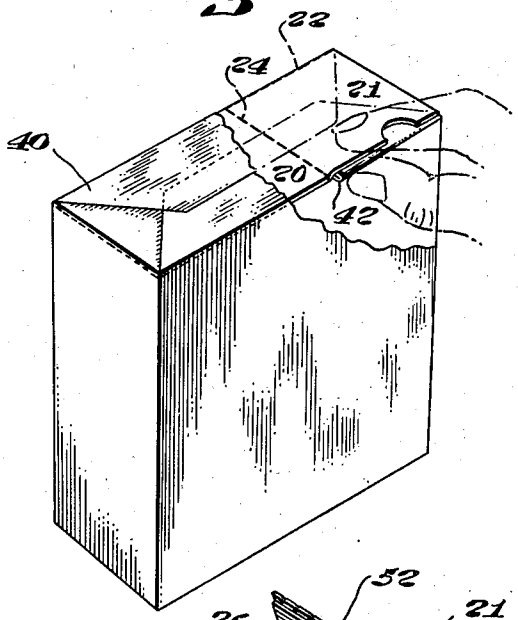


Fig. 6

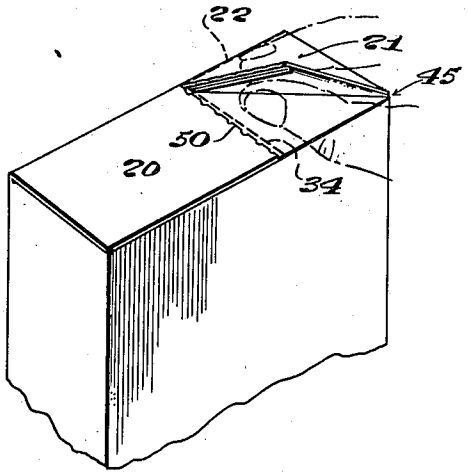


Fig. 7

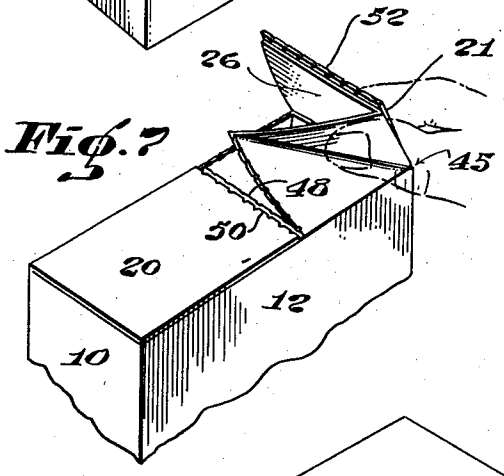


Fig. 8

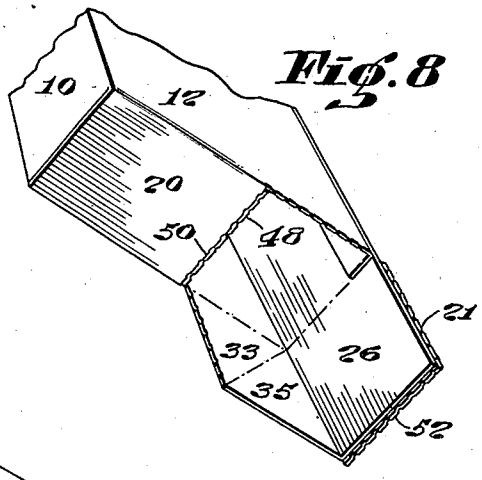
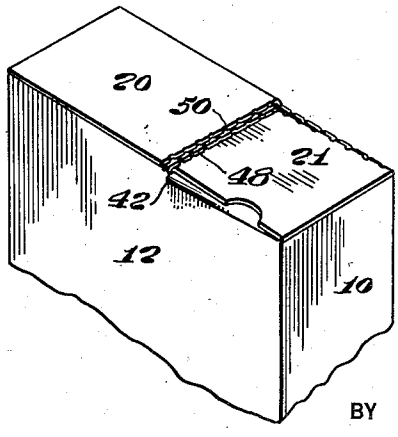


Fig. 9



INVENTOR
Oscar H. Hultin
BY J. Stanley Churchill
ATTORNEY

Patented Dec. 5, 1944

2,364,364

UNITED STATES PATENT OFFICE

2,364,364

PACKAGE

Oscar H. Hultin, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts

Application January 15, 1942, Serial No. 426,808

9 Claims. (Cl. 229—17)

This invention relates to a package and to a carton for producing the package.

The invention has for an object to provide a package comprising a filled carton having a novel and highly efficient top closure adapted to be opened in a manner such as to form a novel pouring spout facilitating the discharge of the contents of the carton and also adapted to be thereafter reclosed in a novel manner.

With this general object in view and such others as may hereinafter appear, the invention consists in the package and carton hereinafter described and particularly defined in the claims at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention, Fig. 1 illustrates a blank from which the present carton may be formed; Fig. 2 is a perspective view of the top of the carton illustrating the latter in its open condition; Fig. 3 is a similar view showing the manner in which the top of the carton is initially closed; Fig. 4 is a plan view of the carton showing the flaps disposed in position for the application of adhesive for sealing the carton; Fig. 5 is a perspective view of the package embodying a filled, closed and sealed carton provided with a wrapper, the latter being partially broken away to reveal an extended portion of the top closure for use in initially opening the carton; Figs. 6, 7 and 8 are perspective views showing successive steps in opening the carton; Fig. 8 showing the carton completely opened to form a pouring spout; and, Fig. 9 is a perspective view showing the top closure in its reclosed condition.

In general, the invention contemplates a package comprising a filled carton having a novel top closure whose construction is such as to enable one end of the top closure to be opened to form a pouring spout for convenience in dispensing the commodity from within the carton, and in which provision is made for enabling the carton to be reclosed in novel and simple manner. In the preferred form of the invention, one of the end flaps of the carton is formed integrally with an adjacent side flap, the latter being preferably scored to permit the connected side and end flaps to be folded together down into top closing position to form a bellows-like fold in one of the flaps. Thus, when the pouring end of the top closure is opened, the integral side and end flaps form at the corner between the same a V-shaped trough or channel through which the contents of the carton may be conveniently poured and discharged.

Provision is also made in the preferred embodiment of the invention for facilitating opening of the pouring end of the carton and to this end perforations or weakened lines are preferably provided in the carton at suitable portions adjacent the pouring end so that the flaps may be easily torn and separated from the remainder of the top closure to form the pouring opening as will be hereinafter more fully described. Further, in the formation of the carton, the bellows fold is preferably made at an angle such as to permit a portion of one of the flaps to extend beyond the edge of the carton in its closed form whereby to provide an easily accessible portion to be grasped and lifted to initiate the opening of the carton. In order to provide a convenient and efficient means of reclosing the carton, a perforated portion of an underlying flap of the carton may be offset with respect to an overlying perforated portion, so that after the carton has been initially opened, the separated flaps forming the pouring spout may be closed and tucked in under the remaining portion of the top closure as will be hereinafter described.

Referring now to the drawings, Fig. 1 illustrates a blank of carton forming material consisting of a body portion comprising the end and side wall panels 10, 12, scored in the usual manner, and provided with bottom flaps 14, 16 of any usual or preferred form extending from the body portion of the carton. The carton is also provided with the usual longitudinal tab 17 for adhesively securing the body portion in its assembled form.

In accordance with the present invention, the top closing flaps are constructed and folded in a manner such as to provide a pouring spout at one end of the carton when the latter is opened as shown in Fig. 8, and, as best shown in Figs. 1 and 2, the top closing flaps comprise an end flap 18, a side flap 20 provided with perforated or weakened lines 22, 24, and a connected end and side flap member comprising an end portion 26 and a side portion 28 provided with score lines 30, 32 arranged to form a bellows fold when the portions 26, 28 are folded along the score lines 30, 32 and down into top closing position. A row of perforations 34 is also provided in the side portion 28 of the connected flaps.

As best shown in Fig. 3, the sequence in which the flaps are initially closed to form the top closure is as follows. The connected end and side flap member is first folded down by folding in the side flap portion 28 and the end portion 26 to form the bellows fold comprising the triangular panels 33, 35 defined by the scored lines 30, 32 and the perforated line 34, and so that the end portion 26 overlies the bellows fold, as illustrated. The end flap 18 is then folded down on top of the side flap portion 28 whereupon the remaining side flap 20 is folded down and adhesively secured to the underlying flaps. As illustrated in Fig. 4, prior to folding down the last folded flap 20, the latter is first spread outwardly for convenience in applying a coating of adhesive

thereto, the exposed surfaces of the flap 18 and portion 26 being also provided with adhesive at the same time. As shown in Fig. 5, the completely sealed package or carton may, in some instances, be provided with an outer wrapper 40.

From the description thus far, it will be observed that in the assembled package or carton, the bellows fold portion of the integral flap member is free of adhesive and that the underlying row of perforations 34 in the flap portion 28 extends transversely of the top of the carton adadjacent one end of the bellows fold, as best shown in Figs. 3 and 4. It will also be observed that the portion 21 of the last folded flap as defined by the perforated lines 22, 24, is adhesively secured to the top of the end flap portion 26 and forms an integral part thereof in the closed carton. It will also be noted that the transverse row of perforations 24 in the overlying side flap 20 is offset with respect to the underlying row of perforations 34 so that the upper panel 21, when separated from the panel 20, will be slightly longer than the underlying portion 26 and the connected portion forming the bellows fold, for a purpose to be hereinafter described.

Referring now to Figs. 5 to 8, in order to open the carton to expose the pouring spout, the top closure is first torn along the upper perforated line 24 by lifting upwardly against the bellows folded portion as shown in Figs. 5 and 6 to separate the panel portion 21 from the side flap 20, the remaining portion of the latter being retained in its initially sealed condition. This operation may be performed by inserting the thumbnail under the exposed folded edge portion of the bellows fold and lifting upwardly. As herein shown, in order to facilitate this operation, the bellows fold is preferably arranged to extend outwardly beyond the edge of the carton so as to provide a convenient projection 42 in the closed carton by which the flaps may be grasped by the thumb and forefinger to initiate the tearing operation. As illustrated in Figs. 1 and 4, the folded edge of the bellows fold is caused to project beyond the edge of the carton, as shown, by scoring the folding line 30 slightly off the perpendicular so that the angle defined by the score line 30 and the top score line 44 of the flap portion 26 will be slightly more than 90°. Thus, when the flap portion 26 is subsequently folded down, the folded edge 30 will project outwardly beyond the edge of the carton, as clearly shown in Fig. 4.

Upon separation of the panel 21 as above described, the upraised flaps are grasped as shown in Fig. 6, and, upon further lifting movement in a diagonal direction toward the corner 45, the underlying perforated portion 34 of the flap 28 and the perforated edge 22 of the upper flap 20 are simultaneously ruptured whereupon the severed panels may be fully extended to form a V-shaped pouring spout, as illustrated in Figure 8.

It will be observed that upon opening the carton, the severed edge 48 of the underlying flap 28 extends beyond the severed edge 50 of the upper flap 20 in the remaining sealed portion of the carton, as a result of the offset relationship between the transverse perforated lines 34 and 24 as previously described, and that the severed edge edge 52 of the detached panel 21 will extend beyond the edge 48 when the flaps are again folded down to reclose the carton. In order to retain the flaps in their reclosed position the refolded flaps comprising the pouring section are pushed down to force the edge 52 of the panel 21 under the edge 48 of the flap 34, as clearly shown in Fig. 9 thus forming a simple and efficient reclosing device for the pouring spout top closure.

From the above description, it will be observed that the present invention provides a novel and improved carton having a top closure which may be easily opened to form a simple and convenient pouring spout and which may be subsequently reclosed in a simple and efficient manner. It will further be observed that the present carton structure is such as to enable it to be economically produced.

While the preferred embodiment of the invention has been herein illustrated and described it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention what is claimed is:

1. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an integral side and end flap member folded to form a bellows like fold in said member as a part of the closed top of the carton and when opened to form a pouring spout, said bellows fold being folded in a manner such as to cause a portion thereof to project beyond one of the wall panels of the carton to facilitate opening of the pouring spout.

2. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an end flap, a side flap, and an integral side and end flap member of rectangular shape and being coextensive with one another when in their opened condition, said integral flap member folded to form a bellows-like fold in the top closure of the carton and arranged when opened to form a V-shaped pouring spout in one corner thereof and of equal extent upon either side of said corner whereby to provide equal support for the material being poured for the full length of said spout, certain of said top closing flaps having weakened lines formed therein adjacent the folded pouring spout transversely of and longitudinally of the top of the carton along which the carton forming material may be readily torn to facilitate initial opening of the pouring spout.

3. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an integral flap member having a side flap portion and an end flap portion of rectangular shape and being coextensive with one another when in their opened condition, said integral flap member being folded to form a bellows-like folded therein adjacent one corner of the carton and arranged when opened to form a V-shaped pouring spout of equal extent upon either side of said corner whereby to provide equal support for the material being poured for the full length of said spout, said top closing flaps also including an individual end flap, and an individual side flap comprising the last folded flap extending along the entire length of the top of the carton, said last folded flap and the underlying side flap portion of said integral flap member having weakened lines formed therein adjacent the folded pouring spout transversely and longitudinally of the closed top of the carton along which

the material may be readily torn to facilitate initial opening of the pouring spout.

4. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an end flap, a side flap, and an integral side and end flap member, said integral flap member folded to form a bellows-like fold in the top closure of the carton and arranged when opened to form a V-shaped pouring spout, certain of said top closing flaps having weakened lines formed therein adjacent the folded pouring spout along which the carton forming material may be readily torn to facilitate initial opening of the pouring spout, said bellows fold being folded at an angle such as to cause a portion thereof to extend beyond one wall of the carton whereby to provide a projection to facilitate lifting the flaps adjacent the pouring spout during the opening operation.

5. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an end flap, a side flap, and an integral side and end flap member, said integral flap member folded to form a bellows-like fold in the top closure of the carton and arranged when opened to form a V-shaped pouring spout, certain of said top closing flaps having weakened lines formed therein adjacent the folded pouring spout along which the carton forming material may be readily torn to facilitate initial opening of the pouring spout, said weakened lines being offset with respect to each other in the assembled carton whereby when the pouring spout is opened the torn edge of a detached portion may be manually forced under the torn edge of a remaining portion to reclose the carton.

6. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an end flap, a side flap, and an integral side and end flap member, said integral flap member folded to form a bellows-like fold in the top closure of the carton and arranged when opened to form a V-shaped pouring spout, certain of said top closing flaps having weakened lines formed therein adjacent the folded pouring spout along which the carton forming material may be readily torn to facilitate initial opening of the pouring spout, said weakened lines being offset with respect to each other in the assembled carton whereby when the pouring spout is opened the torn edge of a detached portion may be manually forced under the torn edge of a remaining portion to reclose the carton, said spout forming portion being folded so as to form a projection from one wall of the carton to facilitate lifting of the flaps to open the pouring spout.

7. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an integral flap member having a side flap portion and an end flap portion, said integral flap member being folded to form a bellows-like fold therein adjacent one corner of the carton and arranged when opened to form a V-shaped pouring spout, said top closing flaps also including an end flap, and a side flap comprising the last folded flap extending along the entire length of the top of the carton, said last folded flap being adhesively secured to the underlying flaps and being provided with weakened lines transversely of and along one edge of the top closure adjacent said pouring spout to facilitate opening thereof, the underlying side flap being provided with a second transverse weakened line offset with relation to said first transverse weakened line whereby when the pouring spout is opened the transverse torn edge of the detached portion of said last folded flap may be forced under the transverse torn edge of the remaining portion of said underlying flap to reclose the pouring spout.

8. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an integral flap member having a side flap portion and an end flap portion integral along a corner fold line, and being substantially coextensive in height with the tallest of the remaining flaps when in their opened condition, one of said portions of said integral flap member being folded inwardly upon a fold line extending diagonally thereacross from the lower end of said corner fold to form a bellows-like fold therein adjacent one corner of the carton and arranged when said integral flap is opened to form a V-shaped pouring spout of substantially equal extent upon either side of said corner, whereby to provide substantially equal support for the material being poured for the full length of said spout, said top closing flaps also including an individual end flap, and an individual side flap comprising the last folded flap extending along the entire length of the top of the carton and having the end thereof adjacent said first end flap portion terminating in a free edge throughout the length thereof, said last folded flap being weakened adjacent the folded pouring spout to permit the material to be readily torn to facilitate initial opening of the pouring spout.

9. As a new article of manufacture, a package comprising a carton having side and end wall panels provided with extensions forming the top closing flaps, said top closing flaps including an integral flap member having a side flap portion and an end flap portion integral along a corner fold line, and being substantially coextensive in height with the tallest of the remaining flaps when in their opened condition, said side flap portion of said integral flap member being folded inwardly upon a fold line extending diagonally thereacross from the lower end of said corner fold to form a bellows-like fold therein adjacent one corner of the carton and arranged when said integral flap is opened to form a V-shaped pouring spout of substantially equal extent upon either side of said corner, whereby to provide substantially equal support for the material being poured for the full length of said spout, said top closing flaps also including an individual end flap, and an individual side flap comprising the last folded flap extending along the entire length of the top of the carton and having the end thereof adjacent said first end flap portion terminating in a free edge throughout the length thereof, said last folded flap being weakened adjacent the folded pouring spout to permit the material to be readily torn to facilitate initial opening of the pouring spout.

OSCAR H. HULTIN.