April 4, 1944. O. H. HULTIN 2,345,978

PACKAGE

Filed Jan. 15, 1942 2 Sheets-Sheet 1

Fig. 1

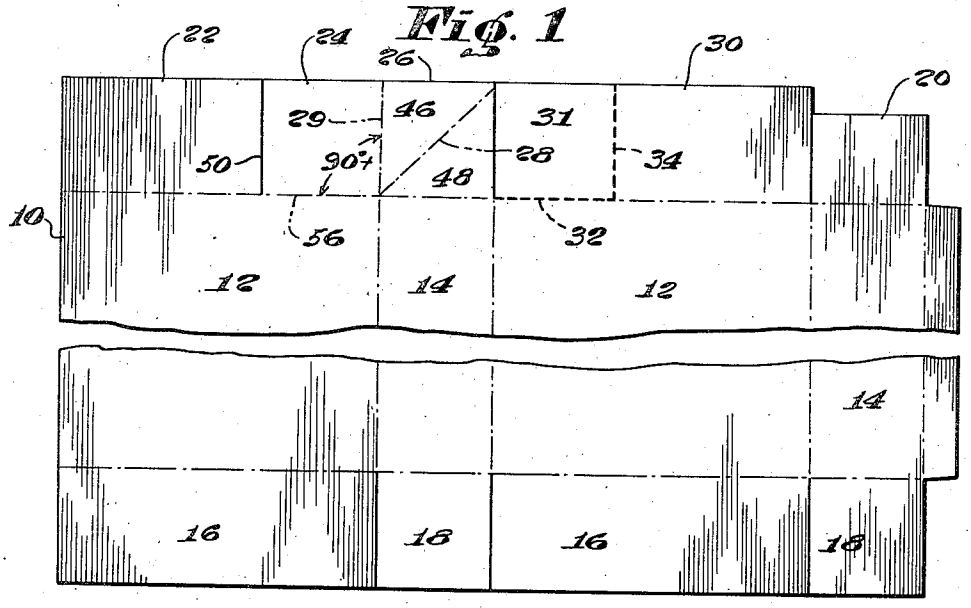


Fig. 2

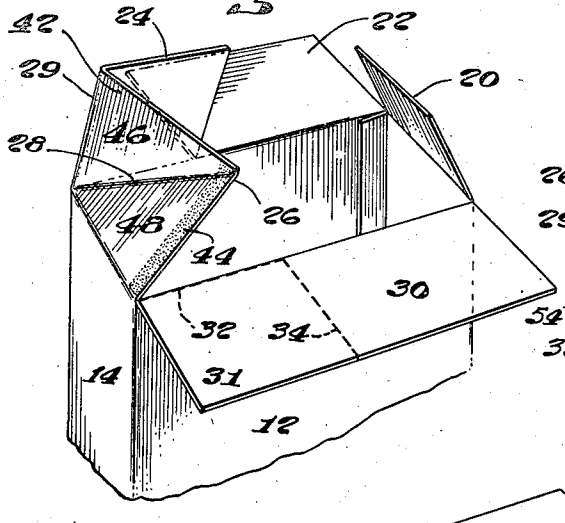


Fig. 3

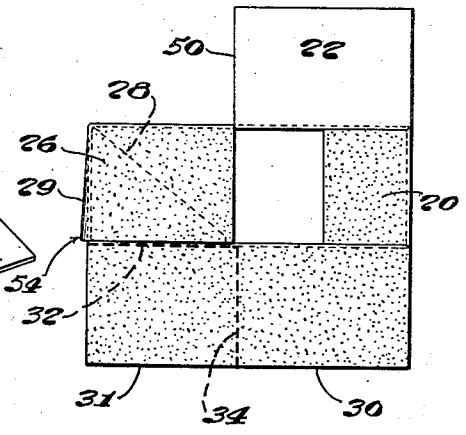
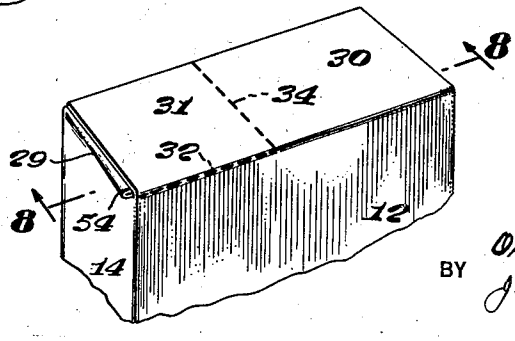


Fig. 4



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April 4, 1944. O. H. HULTIN 2,345,978

PACKAGE

Filed Jan. 15, 1942 2 Sheets-Sheet 2

Fig. 5

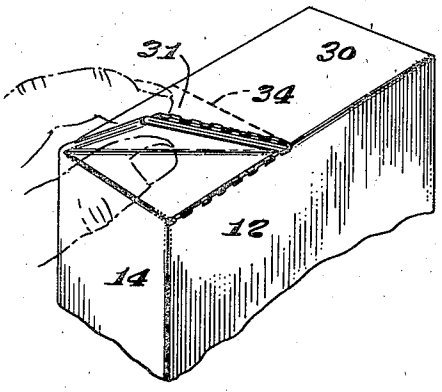


Fig. 6

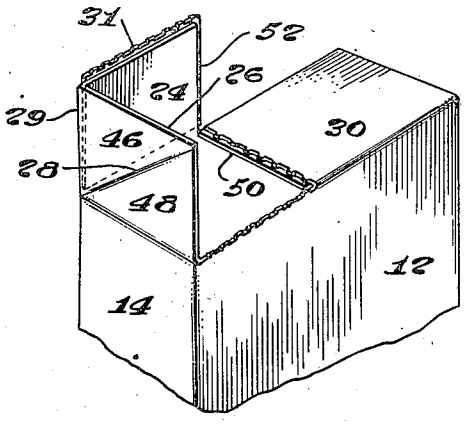


Fig. 7

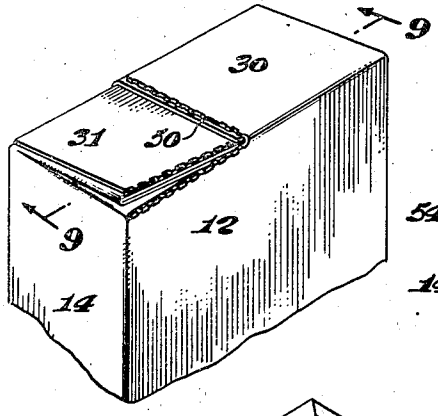


Fig. 8

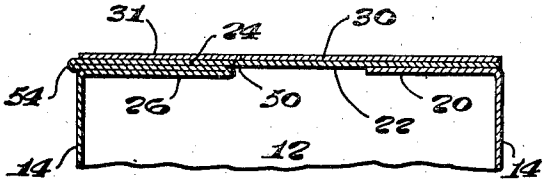
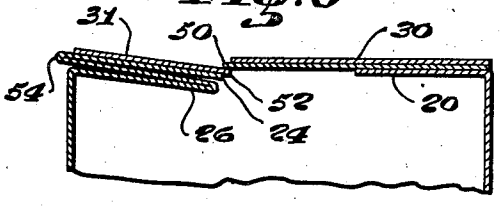


Fig. 9



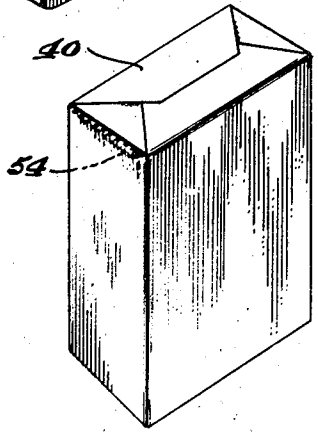


Fig. 10

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Patented Apr. 4, 1944

2,345,978

UNITED STATES PATENT OFFICE

2,345,978

PACKAGE

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

Application January 15, 1942, Serial No. 426,809

4 Claims. (Cl. 229—17)

This invention relates to a package.

The invention has for an object to provide a novel and improved package comprising a carton having a novel top closure adapted to be opened to form a convenient pouring spout for dispensing the commodity within the carton and which may be thereafter reclosed in a simple convenient manner.

With this general object in view and such others as may hereinafter appear, the invention consists in the package having the novel top closure, 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 shows a blank from which the present carton may be formed; Fig. 2 is a perspective view showing the top of the carton and illustrating the manner in which the top flaps are initially closed; Fig. 3 is a plan view of the carton partially closed showing the flaps to which adhesive is applied prior to completing the closure thereof; Fig. 4 is a perspective view of the completed top closure; Fig. 5 is a perspective view illustrating the manner in which the top closure is initially opened to form a pouring spout; Fig. 6 is a similar view showing the flaps fully extended and forming a V-shaped pouring spout; Fig. 7 is a perspective view showing the top closure in its reclosed condition; Fig. 8 is a cross section through the top closing flaps taken on the line 8—8 of Fig. 4; Fig. 9 is a similar view after the carton has been initially opened and reclosed, the section being taken on the line 9—9 of Fig. 7; and, Fig. 10 is a perspective view of a carton embodying the present invention and provided with an outer wrapper.

In general, the invention contemplates a package comprising a carton having a novel and improved top closure of a construction such as to enable one end of the closure to be easily opened to form a pouring spout for convenience in discharging the contents of the carton, and in which provision is also made for enabling the carton to be reclosed in a novel and efficient manner.

In the preferred form of the invention, the carton is provided with an end flap formed integrally with an adjacent side flap, the end flap being scored at an angle to permit the connected side and end flaps to be folded together to form a bellows like fold, in which the side flap overlies the folded end flap when the top of the carton is closed. Thus, when the pouring end of the top closure is opened and extended, the integral side and end flap member forms a V-shaped trough or channel through which the commodity may be discharged. Perforated or weakened lines may be provided in the last folded closing flap adjacent the pouring spout section and the latter may be opened by merely lifting the flaps upwardly to tear the last folded flap along the perforated lines. In the preferred embodiment of the invention, the bellows fold is formed at an angle such as to cause one edge thereof to extend beyond an end wall of the carton, forming a convenient projection to be grasped and lifted to initiate tearing of the carton top. One line of perforations above referred to extends transversely of the last folded flap comprising a side flap, and is arranged so that the torn edge of a detached portion extends beyond the underlying edge of a remaining flap when the carton is opened. Thus, in reclosing the pouring spout, the folded spout portion may be pushed downwardly into the carton until the extended edge is engaged beneath the transverse edge of the remaining portion of the top closure, as will be hereinafter more fully described.

Referring now to the drawings, see Fig. 1, 10 represents a carton blank provided with scored fold lines defining side wall panels 12, and end wall panels 14 provided with bottom closure flaps 16, 18 of conventional form extending from the panels 12, 14 respectively. 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. 6, and, as best shown in Figs. 1 and 2, the top closing flaps comprise an end flap 20, a cut or partial side flap 22, a connected end and side flap member comprising a side flap portion 24, and an end flap portion 26 provided with an angularly scored line 28 arranged to form a bellows-like fold in the assembled carton, and a last folded flap comprising a side flap 30 extending across the entire length of the top of the carton. As herein shown, the last folded flap is provided with perforated or weakened lines 32, 34, one of which 32 extends along one edge of the assembled carton adjacent the pouring spout, the second line 34 extending transversely of the assembled carton adjacent the inner edge of the pouring spout.

As best shown in Figs. 2 and 4, the sequence of initially closing the flaps to form the top closure comprises first folding down the spout forming portion comprising the connected end and side flap member by folding in the end portion 26 along the diagonally scored line 28 and scored line 29 and simultaneously folding in the side flap portion 24 so that the latter overlies

the bellows-like fold thus formed, as illustrated. The individual end flap 20 is then folded in whereupon the flaps are provided with adhesive as indicated by the shaded areas shown in Fig. 3. The adhesive free side flap portion 22 is then folded down and adhesively secured to the underlying end flap 20 whereupon the remaining side flap 30 is folded down and adhesively secured to the underlying flaps to complete the top closure, as illustrated in Fig. 4. As shown in Fig. 10, the completely sealed carton or package may, in some instances, be provided with an outer wrapper 40 if desired. Furthermore, in some instances, it may be desirable to tack together the marginal edges 42, 44 of the triangular portions 46, 48 of the bellows-like fold by providing a narrow strip of adhesive along the marginal edge 44 as shown in Fig. 2 in order to prevent the folded spout portion, otherwise adhesive free, from bulging due to the inherent spring in the carton material, and to provide a more efficient seal. However, the narrow seal thus formed may be easily broken upon lifting the flaps when opening the carton as will be hereinafter described.

From the description thus far it will be observed that the portion 31 defined by the perforated lines 32, 34 of the last folded flap 30 is adhesively secured to the top of the side flap portion 24 and forms an integral part thereof in the assembled carton. It will also be noted that the transverse row of perforations 34 in the last folded flap 30 is offset slightly with respect to the edge 50 of the underlying side flap portion 22 so that when the pouring spout is opened and refolded, the torn edge 52 of the detached panel 31 will extend beyond the edge 50 for a purpose to be hereinafter described.

Referring now to Figs. 4, 5 and 6, in order to open the carton to expose the pouring spout, the top closure is first torn along the perforated edge 32 by lifting upwardly against the bellows folded portion as shown in Fig. 5, and at the same time, breaking the narrow sealed portion along the edge 44. Thereafter, the flaps thus raised may be grasped as shown in Fig. 5 and by pulling upwardly in a diagonal direction, the top flap is torn along the transverse perforated line 34 to separate the panel 31 from the last folded flap 30, the remaining portion of the latter being retained in its initially sealed condition. This operation may be performed by inserting the thumbnail or a knife under the exposed edge portion of the bellows fold and raising the flaps upwardly. However, in the preferred and illustrated embodiment of the invention, the bellows fold is preferably arranged to extend outwardly beyond the edge of the carton so as to provide a convenient projection 54 by which the flaps may be engaged by the thumb to initiate the tearing operation. As illustrated in Figs. 1 and 3, the folded edge of the bellows fold is caused to project beyond the end of the carton by scoring the folding line 29, connecting the end and side flap portions 24, 26, slightly off the perpendicular, so that the angle defined by the score line 29 and the top score line 56 adjacent the side flap portion 24 will be slightly more than 90°. Thus, when the flap portion 24 is subsequently folded down, the folded edge 29 will project outwardly beyond the edge of one end of the carton, as clearly shown in Fig. 3.

Upon tearing the flap along the perforated lines as above described, the bellows portion 26 and its connected side flap portion 24 may be unfolded and extended as shown in Fig. 6 to form a V-shaped pouring spout. It will be observed that the detached panel 31 is adhesively secured to the side flap portion 24 and that the torn edge 52 of the detached panel extends beyond the edge 50 of the side flap portion 22 when the pouring spout is again folded down to reclose the carton. In order to retain the folded pouring spout in its reclosed condition the refolded flaps may be pushed down to force the torn edge 52 of the panel 31 under the edge 50 of the side flap portion 22 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 seen that the present carton is provided with a top closure affording a simple and convenient pouring spout and whose construction is such as to permit the carton to be economically produced. It will be further observed that the present pouring spout may be reclosed in a simple and novel manner to provide an efficient reclosure for the carton.

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 end flap, a partial side flap, an integral side and end flap member scored and folded to form a bellows-like fold at one end of the assembled carton and arranged when opened to form a V-shaped pouring spout, and a full length side flap comprising the last folded flap, said last folded flap only having weakened lines formed therein adjacent the folded pouring spout transversely and longitudinally of the top of the carton and along which the material may be readily torn 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 partial side flap, an integral side and end flap member scored and folded to form a bellows-like fold at one end of the assembled carton and arranged when opened to form a V-shaped pouring spout, and a full length side flap comprising the last folded flap, said last folded flap only having weakened lines formed therein adjacent the folded pouring spout transversely and longitudinally of the top of the carton and along which the material may be readily torn to facilitate opening of the pouring spout, said bellows-like fold being folded at an angle such as to cause a portion thereof to extend beyond the end portion of the closed carton whereby to provide a projection to facilitate lifting the flaps adjacent the pouring spout during the opening operation.

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 end flap, a partial side flap, an integral side and end flap member scored and folded to form a bellows-like fold at one end of the as-

sembled carton and arranged when opened to form a V-shaped pouring spout, and a full length side flap comprising the last folded flap, said last folded flap being adhesively secured to the underlying flaps and being provided with perforated lines along one edge, and transversely of the top closure adjacent said pouring spout in the closed carton to facilitate opening thereof, said partial side flap presenting a transverse edge thereof parallel to and slightly offset with relation to said transverse perforated line, whereby upon opening the carton, the transverse torn edge of the detached portion of said last folded flap may be forced under the transverse edge of said partial side flap to reclose 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 partial side flap, an integral side and end flap member scored and folded to form a bellows-like fold at one end of the assembled carton and arranged when opened to form a V-shaped pouring spout, and a full length side flap comprising the last folded flap, 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 in the closed carton, said bellows-like portion being folded so as to form a projection from one end of the assembled carton to facilitate opening of the pouring spout along said weakened lines, whereby the latter may be opened by first tearing along the weakened edge portion and thereafter simultaneously raising the flaps and tearing along the transverse weakened line.

OSCAR H. HULTIN.