

W. H. DOBLE.

CARTON.

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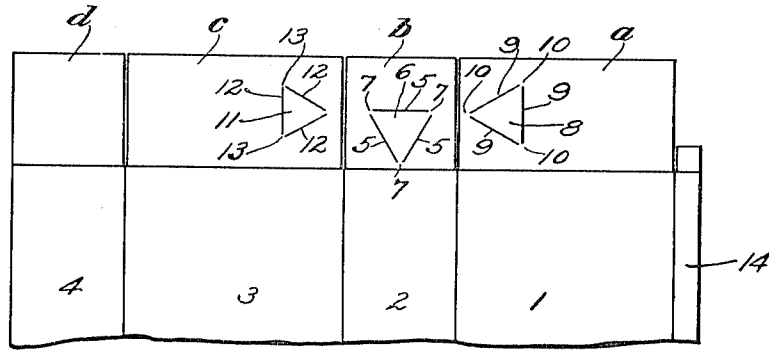


Fig. 1.

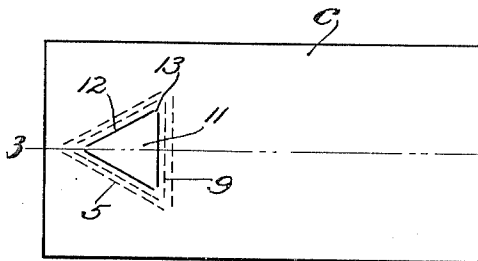


Fig. 2.

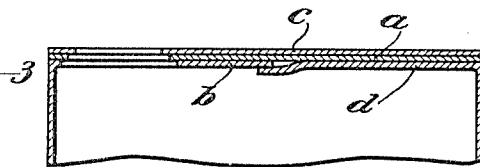


Fig. 3.

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UNITED STATES PATENT OFFICE.

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CARTON.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. DOBLE, a citizen of the United States, residing at Quincy, county of Norfolk, State of Massachusetts, have invented a certain new and useful Improvement in Cartons, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to that class of cartons in which the top is closed by a plurality of overlapping flaps.

One object of the invention is to so construct the flaps that a portion of each of the overlapping flaps has a partially severed portion which, when desired, may be easily detached to permit an opening through the several overlapping flaps, in order to make a small passage for the removal of the material in the carton, and yet said partially severed portions supporting each other in a manner to resist the outward pressure of the material in the carton before it is desired to remove the contents.

In carrying out the invention I form on each of the overlapping flaps a series of slits or perforations along the boundary lines of the portions which are to be detached, leaving only slight connecting portions which can easily be cut or broken, and these detachable portions are in alinement with each other, but of different sizes, increasing in size from the outer one to the inner one.

The invention will be fully understood from the following description taken in connection with the accompanying drawings, and the novel features will be pointed out and clearly defined in the claims at the close of the specification.

In the drawings: Figure 1 is a plan of a portion of a blank laid out flat, of suitable form to be folded to form a carton embodying the invention. Fig. 2 is a top plan of a folded or set up carton made out of the blank of Fig. 1. Fig. 3 is a section on line 3—3 of Fig. 2, the detachable portions having been removed to show the opening, the lower part of the carton being broken away, as that is not needed to illustrate the invention.

Referring now to the drawings: The carton blank is scored to form the four sides, 1, 2, 3, 4, of the carton when the carton is set up, the sides 1 being folded around to

meet the edge of the side 4, the same being sealed by a flap 14 which laps onto the side 1, and is adhesively secured thereto. This particular form of construction, however, thus far described, simply illustrates one manner of forming and folding the blank, and it is not intended to limit the invention to application to a carton having a body of this particular form of construction. The bottom, which is not shown, may be closed by end closing flaps in well known manner. The sides, 1, 2, 3, 4, terminate in top closing flaps, *a*, *b*, *c*, *d*, respectively, the blank being slit to separate the said flaps from each other, so that they may be separately folded in the usual manner.

In the usual order of folding the end closing flaps the two short flaps *b*, *d*, are usually folded before the longer flaps *a*, *c* are folded. These two flaps *b*, *d* barely overlap each other at their meeting edges, and do not bridge the entire top of the box. For the purpose of illustrating the invention the detachable portions of the flaps are so formed that the flaps *b*, *d* should first be folded, then the flap *a* should be folded down over the two flaps *b*, *d*, and the flap *c* should be folded over the top of flap *a*. The flap *b* which is one of the two inside ones, has a series of slits 5, which form a broken triangle surrounding a detachable triangular portion 6. At the apex of each angle there is left a connecting portion 7 which has to be severed by the user at the time it is intended to effect an opening in the package. The flap *a* which is intended to overlap the flap *b* has a detachable triangular portion 8 corresponding in shape to the triangular portion 6, except slightly smaller, and outlined by the slits 9 with connecting portions 10 at the apex of the several angles, and this triangular portion 8 is so located that when the flaps are folded the portion 8 will centrally overlie the portion 6, the sides of the one triangular piece being parallel with the sides of the other triangular piece. The flap *c* which overlaps the flap *a* is formed with a detachable portion 11 of triangular form, somewhat smaller than the triangular portion 8, and outlined by the slits 12, with connecting portions 13 at the apexes of the angles, and this triangular piece 11 is also so located that when the flap is folded it will centrally overlie the flap 8 with its sides parallel with the trian-

gular portion 8. It will thus be seen that when the flaps are closed the edges of the inner portion 6 will, when there is outward pressure brought against the said triangular portion from within, press against the solid part of the flap *a* surrounding the detachable portion 8, and in the same manner the outward pressure which is transmitted through the triangular portion 8 will be resisted by the solid marginal portion of the flap *c* surrounding the triangular portion 11, and this renders the package more secure against accidental breaking through the three detachable portions by the pressure of the contents from the inside, than would be the case if the detachable portions were all in registration with each other.

When it is desired to gain access to the inside of the package to remove the contents, the connecting portions of each of the detachable triangular members having such a fragile connection may be easily broken by punching down upon the outside triangular member 11, and all three of the said triangular members thus being severed may be pushed down into the inside of the box, as the contents of the box will usually yield sufficiently to allow this to be done, or after they are severed they can be pushed to one side beneath the flaps. Only the small outside member 11 can be drawn out through the opening, as the triangular members 6 and 8 are too large to be withdrawn. The members, however, which are pushed inside can readily be poked out of the way so as not to interfere with the pouring out of the contents through the openings now left in the three flaps. The flap *d* is so short that it does not extend into registration with the openings. If, however, the said flap *d* should be made long enough to extend beneath the openings in the other flaps, it is obvious that there should be a detachable portion made in that flap.

Some dealers desire to have a coupon accompany the package of goods of such

character that it can be identified when it is turned in to be redeemed, and to meet the demand of those who desire such coupons the outer triangular portion 13 may be made to serve as such coupon by printing upon it any suitable matter to go upon a coupon. The user of the package in first opening it will remove this small triangular portion, and retain it as the coupon.

It is usually customary to seal the several overlapping flaps to those beneath by a suitable adhesive. Care, however, should be exercised to leave the detachable portions free from adhesive, so as not to interfere with their separation.

While for illustrative purposes we have shown the detachable portion as being of triangular form, it is obvious that other geometrical forms may be employed, and embody the invention.

What I claim is:

1. A carton having a plurality of overlapping end closing flaps, each of which has a portion outlined by a broken line of cuts to enable said portion to be readily detached, the said detachable portions being located in alinement with each other, the detachable portions being of diminishing sizes from the innermost to the outermost.

2. A carton having a plurality of overlapping end closing flaps, each of which has a portion outlined by a broken line of cuts to enable said portion to be readily detached, the said detachable portions being located in alinement with each other, the detachable portions being of diminishing sizes from the innermost to the outermost, the sides of each detachable portion being parallel with the corresponding sides of the other detachable portions.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM H. DOBLE.

Witnesses:

WILLIAM A. COPELAND,
ALICE H. MORRISON.