April 25, 1939. R. M. HOLMES 2,155,791

CARTON

Filed June 18, 1937 2 Sheets-Sheet 1

Fig. 1

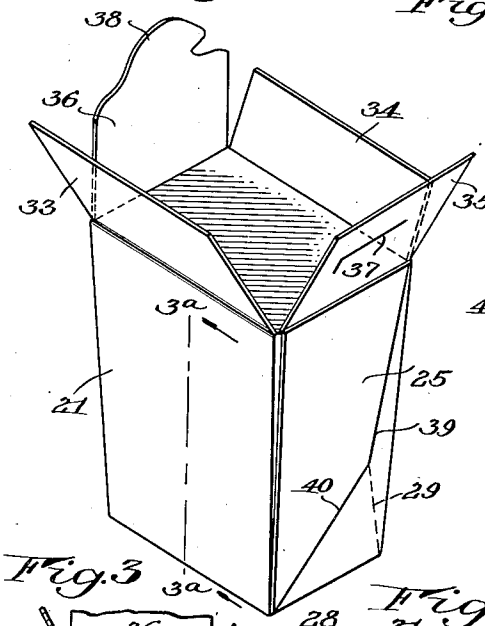



Fig. 9

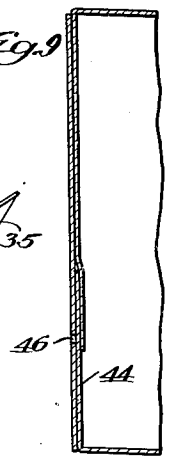



Fig. 8

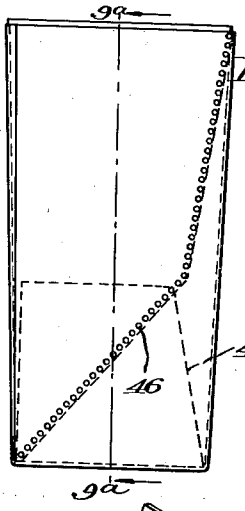



Fig. 3

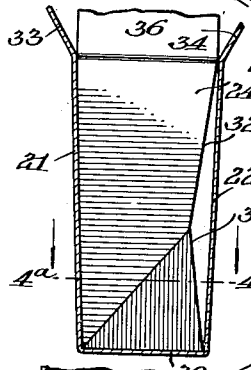
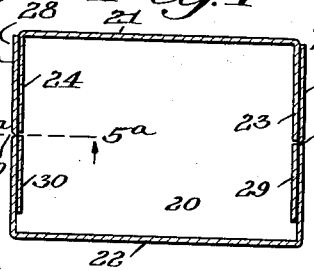



Fig. 4



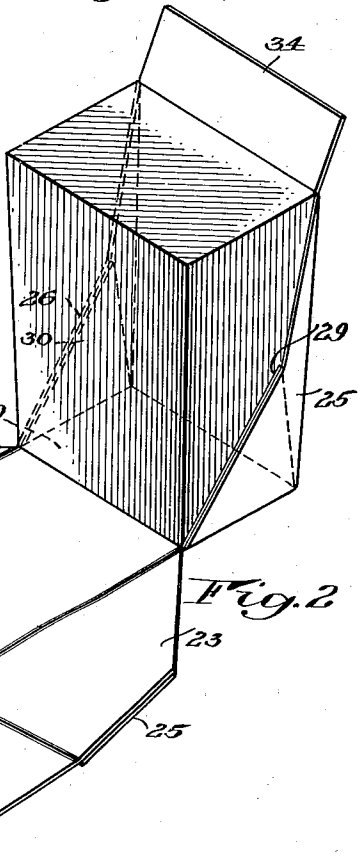




Fig. 5

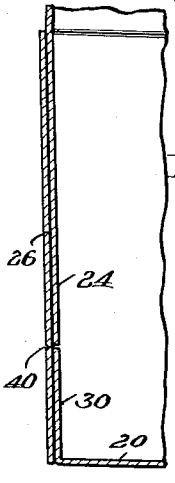



Fig. 6 Fig. 7

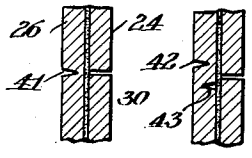



Fig. 2

INVENTOR.
Raynor M. Holmes
BY Cumpston & Shepard
his ATTORNEYS

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CARTON

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Fig. 12

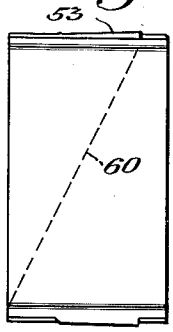



Fig. 13

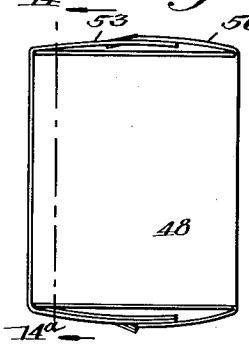
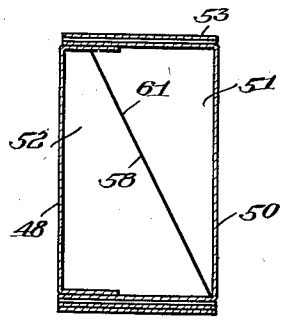



Fig. 14



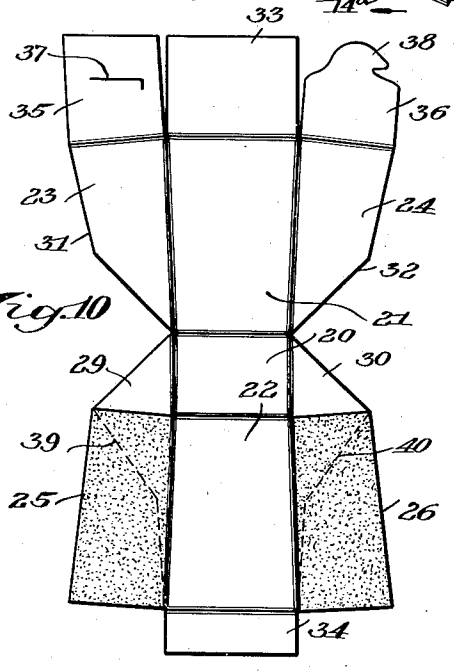




Fig. 10

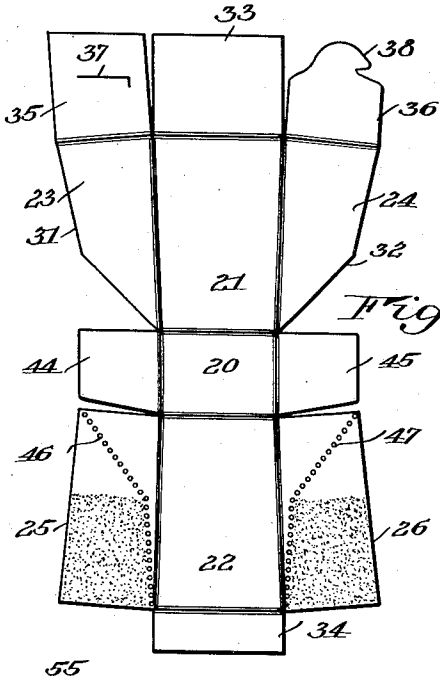



Fig. 11

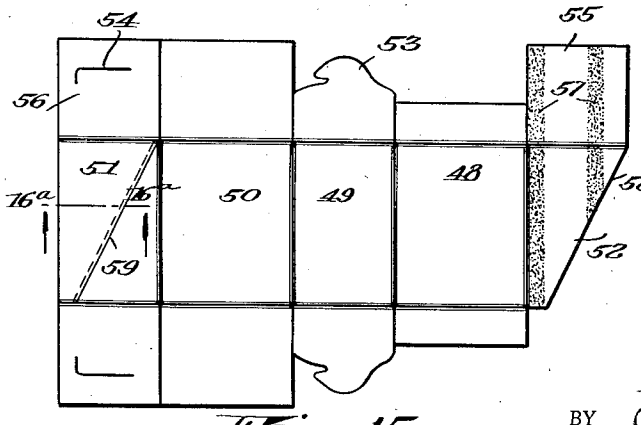



Fig. 15




Fig. 16

INVENTOR.
Raynor M. Holmes
BY Cumpston & Shepard
his ATTORNEYS

Patented Apr. 25, 1939

2,155,791

# UNITED STATES PATENT OFFICE

2,155,791

## CARTON

Raynor M. Holmes, Newark, N. Y., assignor to Bloomer Bros. Company, Newark, N. Y., a corporation of New York

Application June 18, 1937, Serial No. 148,976

9 Claims. (Cl. 229—16)

This invention relates to cartons of the variety commonly made of paper, cardboard or other sheet material, for holding substances such as ice cream or other food products, an object of the invention being the provision of a simple and inexpensive carton of the above character of sufficiently tight construction to hold fluid or semi-fluid contents, such as ice cream, and yet capable of being quickly and readily torn apart by the consumer for convenient access to the contents.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a perspective view of one form of carton embodying the present invention;

Fig. 2 is a similar view with the carton torn open to expose the ice cream or other contents;

Fig. 3 is a vertical sectional view on the line 3*a*—3*a* in Fig. 1;

Fig. 4 is a horizontal sectional view taken on the line 4*a*—4*a* in Fig. 3;

Fig. 5 is a fragmentary vertical section on the line 5*a*—5*a* in Fig. 4;

Fig. 6 is a fragmentary enlargement of a detail shown in Fig. 4;

Fig. 7 is a modification of the detail shown in Fig. 6;

Fig. 8 is a side elevation of a somewhat modified construction;

Fig. 9 is a fragmentary section on the line 9*a*—9*a* in Fig. 8;

Fig. 10 shows the blank from which the carton of Fig. 1 is constructed;

Fig. 11 shows the blank from which the carton of Fig. 8 is constructed;

Fig. 12 is a side elevation of a further modification of the carton;

Fig. 13 is an elevation as viewed from the right in Fig. 12;

Fig. 14 is a section on the line 14*a*—14*a* in Fig. 13;

Fig. 15 shows the blank from which the carton of Fig. 12 is constructed, and

Fig. 16 is an enlarged fragmentary section on the line 16*a*—16*a* in Fig. 15.

The same reference numerals throughout the several views indicate the same parts.

This invention is in the nature of an improvement upon the carton disclosed in the patent to Inman and Bloomer No. 1,908,251, dated May 9, 1933, and is capable of various embodiments. One of the embodiments herein disclosed by way of illustration is an ice cream pail illustrated in Figs. 1 to 6, inclusive, and 10 of the drawings. Referring first to Fig. 10, the blank is cut and scored, as shown, for folding to form a bottom 20 and a pair of opposite side walls 21 and 22. These side walls are provided with inwardly folding flaps 23, 24, 25 and 26, the opposite ones of which are overlapped and glued together to form a second pair of opposite side walls indicated generally at 27 and 28 (Fig. 4).

The bottom has upwardly folding flaps 29 and 30, preferably of the substantially triangular shape shown, for cooperation with the flaps 23 and 24 to form the second pair of side walls, these flaps being cut away as shown so that in the erected carton they lie in the same plane, as shown in Figs. 3, 4, and 5. It will be noted that the edges 31 and 32 of flaps 23 and 24, respectively, are so shaped as to extend (Fig. 3) substantially diagonally endwise or from top to bottom and also across the carton from side to side. The side walls 21 and 22 carry flaps 33 and 34 for folding across the top of the carton. The other side walls carry flaps 35 and 36 which are folded over flaps 33 and 34 and provided with tongue and slot means 37 and 38 of any known or suitable variety, to be manually engaged or interlocked to secure the end flaps together to form a closure for the top or filling opening of the carton.

In the erected carton of Fig. 1, side wall flaps 25 and 26 are preferably supplied with glue, as conventionally indicated in Fig. 10, and folded exteriorly to overlap side flaps 23 and 24 and bottom flaps 29 and 30, and these flaps 25 and 26 are formed with weakened tear lines 39 and 40, by scoring or other equivalent means, as well understood in the art, located to extend along and substantially coincide with the edges of the flaps 23, 24, 29 and 30. In Fig. 6, there is shown generally at 41 a known form of such scoring, while Fig. 7 shows similar lines of scoring 42 and 43 from opposite sides of the sheet and slightly spaced apart on opposite sides of the edges of the inner flaps to confine the tearing. Where desired, flaps 25 and 26 may be glued to flaps 23 and 24 only and not to the bottom flaps 29 and 30.

Figs. 8, 9 and 11 show a pail of similar construction, except that the bottom flaps 44 and 45 are more nearly rectangular in shape and the weakened tear lines 46 and 47 are formed by spaced indentations or perforations in the sheet material as understood in the art, as distinguished from the substantially continuous cut or indentation shown in the modification of Fig. 1.

In this modification also the glue is discontinued adjacent the tops of the flaps **44** and **45** which are located between the flaps on the side walls but are free to slide out as the side wall flaps are torn to open the carton.

Both of the modifications of Figs. 1 to 11, inclusive, in erected condition, are filled through the top opening and closed by folding in and securing the described flaps **33**, **34**, **35**, and **36**. To remove the contents, these flaps are opened and flaps **35** and **36**, with the flaps **23**, **24**, and portions of flaps **25** and **26** glued to them are pulled outwardly and downwardly so as to tear the flaps **25** and **26** along the weakened lines **39** and **40**. It has been found that such tearing is greatly facilitated by the reenforcing and strengthening of flaps **25** and **26** by the flaps **23**, **24**, **29** and **30**. Also that the underlying substantially coincident edges of the flaps **23**, **24**, **29** and **30** act as sharp straight edges which guide and confine the tearing action against extending into and stripping other portions, with the result that the tearing is quickly, readily and cleanly effected and confined to the desired line which preferably extends, as shown, from top to bottom and side to side so as to fully expose the contents of the carton for removal. This embodiment thus affords the convenient tapered and nesting type of pail in a simple, tight, and inexpensive construction without cumbersome projections, but capable of being quickly and easily torn apart along the desired lines for exposing the contents.

Figs. 12 to 16, inclusive, illustrate the application of the principles of the invention to the so-called "linerless" or rectangular type of carton. The blank is cut and scored, as shown in Fig. 15, to form pairs of opposing side walls **48**, **49**, **50** and **51**. Side wall **51** overlaps externally and is glued to a flap **52** on wall **48**, preferably of the shape shown. Each of the side walls **48** to **51** is provided at both ends with inwardly folding end closure flaps, of any known or suitable construction, and the opposite outer pair of these flaps at each end are formed with tongue and slot means, **53** and **54**, of any known or suitable type, for securing these flaps in closed position. The inner side wall flap **52** is also preferably provided at one end with a closure flap **55** as shown, which is preferably glued to the under side of an end flap **56** at the other extremity of the blank to reenforce the same and assist in the opening of the carton, as further described hereafter. The glue may be applied to flaps **52** and **55** in various ways, and is here shown applied in spaced lines **57** falling on opposite sides of the locking slot **54** so as not to interfere with the entrance of the tongue **53**.

The provision for tearing down this modification of Figs. 12 to 16 comprises the inclined edge **58** on the inner side wall flap **52** arranged to extend from end to end and side to side of the carton as shown in Fig. 15. In addition the overlying outer side wall **51** is scored and weakened in any known and suitable manner indicated generally at **59** substantially along or coincident with the edge **58** of the inner flap. This scoring of wall **51** is preferably from both surfaces in slightly spaced lines, as indicated at **60** and **61** in Fig. 16, these lines being on opposite sides of the edge **58** of the underlying flap which cooperates with such scoring in wall **51** to produce a highly efficient form of weakening by which the tearing action is facilitated and confined to the desired line, in accordance with the principles described above in connection with the embodiment of Fig. 1.

The carton of Figs. 12 to 16, inclusive, is closed at one end, filled and closed at the opposite end, and when it is desired to remove the contents it is opened at the end which comprises the double flap formed by the gluing together of the end flaps **55** and **56**. This end of the carton may be identified by any suitable designation, and this reenforced flap means is grasped and pulled outwardly, thus affording a strong means for tearing the carton along the weakened line. Such action forces outwardly the edge **58** of the inner flap **52** to act as a straight edge along the lines of scoring, and this action, under the outward pull on the adjacent reenforced portion of the wall, quckly and easily tears the wall along the weakened line. This severs the carton from end to end and side to side and effectively opens it up for full access to the contents.

The invention in thus accomplishing its objects, contributes to the convenience and efficiency of the "pail" and "linerless" types of cartons by providing them in a form affording convenient access to their contents in a construction which is economical of materials, free from cumbersome projections, and readily operated by the user.

While certain embodiments of the invention have been disclosed, it is to be understood that the inventive idea may be carried out in a number of ways. This application is therefore not to be limited to the precise details described, but is intended to cover all variations and modifications thereof falling within the spirit of the invention or the scope of the appended claims.

I claim:

1. A carton comprising a blank cut, folded and glued to provide side walls and ends, one of said ends comprising overlapping flaps folded from the side walls and provided with engageable means to secure said flaps together, and one of said side walls comprising portions overlapped and glued together with a weakened tear line in one of said portions extending endwise of the carton substantially along a cooperating edge of the other of said portions to afford a line along which said side wall may be readily torn to expose the carton contents.

2. A carton comprising a blank cut, folded and glued to provide pairs of opposite side walls, overlapping flaps folded from said side walls to form the carton ends and provided with manually engageable means to secure said flaps together, and one of said side walls comprising portions overlapped and glued together with a weakened tear line in one of said portions extending endwise of the carton substantially along a cooperating edge of the other of said portions to afford a line along which said side wall may be readily torn to expose the carton contents.

3. A carton comprising a blank cut, folded and glued to provide pairs of opposite side walls, overlapping flaps folded from said side walls to form the carton ends and provided with manually engageable means to secure said flaps together, and one of said side walls comprising portions overlapped and glued together with a weakened tear line in one of said portions extending substantially diagonally endwise and across said wall, the other of said portions having an edge substantially along and cooperating with said tear line to define a line along which said side wall may be readily torn to expose the carton contents.

4. A carton comprising a blank cut, folded and

glued to provide a bottom and a pair of opposite side walls, flaps on said side walls overlapped and glued to provide a second pair of side walls, and flaps on said side walls provided with engageable means for securing them together to form the top of said carton, one of the flaps of one of said second pair of side walls having a weakened tear line extending substantially endwise of the carton along a cooperating edge of the other flap of said side wall to define a line along which said side wall may be readily torn to expose the carton contents.

5. A carton comprising a blank cut, folded and glued to provide a bottom and a pair of opposite side walls, flaps on said side walls overlapped and glued to provide a second pair of side walls, and flaps on said side walls provided with manually engageable means for securing them together to form the top of said carton, one of the flaps of one of said second pair of side walls having a weakened tear line extending from said top substantially diagonally down and across the carton along a cooperating edge of the other flap of said side wall to define a line along which said side wall may be readily torn to expose the carton contents.

6. A carton comprising a blank cut, folded and glued to provide side walls and ends, one of said ends comprising overlapping flaps folded from the side walls and provided with engageable means to secure said flaps together, and said side walls on two opposite sides of said carton each comprising side flaps overlapped and glued to said side flaps of said opposite wall with weakened tear lines in the outer of said overlapped side flaps extending endwise of the carton substantially along cooperating edges of the inner of said side flaps, said inner side flaps having a pair of said end flaps folded therefrom to afford integral gripping means for pulling said inner side flaps to tear said outer side flaps along said weakened tear lines.

7. A carton comprising a blank cut, folded and glued to provide a bottom and a pair of opposite side walls, opposite side flaps folded from said bottom wall, side flaps on said side walls overlapped and glued to provide a second pair of side walls, the inner of said side flaps and said bottom flaps on the same side of the carton lying in the same plane with abutting edges inclined from one side of the carton obliquely toward the other side, end flaps on said side walls provided with engageable means for securing them together to form the top of said carton, the outer of said opposite side flaps having weakened tear lines extending endwise of the carton along said inclined edges of the inner of said side flaps to define lines along which said side walls may be readily torn to expose the carton contents.

8. A carton comprising a blank cut, folded and glued to provide a bottom and a pair of opposite side walls, opposite side flaps folded from said bottom wall, side flaps on said side walls overlapped and glued to provide a second pair of side walls, the inner of said side flaps and said bottom flaps on the same side of the carton lying in the same plane with abutting edges inclined from adjacent the bottom of one side of the carton obliquely toward the other side, end flaps on said side walls provided with engageable means for securing them together to form the top of said carton, the outer of said opposite side flaps having weakened tear lines extending substantially along said inclined edges of said inner side flaps from adjacent the bottom of one side of said carton partially toward the opposite side and thence at an angle upwardly to the opposite top corners thereof to define lines along which said outer side flaps may be readily torn to collapse said carton substantially into the plane of said bottom wall.

9. A carton comprising a blank cut, folded and glued to provide a bottom and a pair of opposite side walls, side flaps on said side walls overlapped and glued to provide a second pair of inner and outer side walls, end flaps on said inner side flaps provided with manually engageable means for securing them together to form the top of said carton, side flaps folded upwardly on opposite sides of said bottom wall, said bottom flaps and said inner side flaps on the same side of the carton lying substantially in the same plane and having abutting edges inclined obliquely from adjacent the bottom of one side of said carton toward the other side thereof, and said outer side flaps having weakened tear lines extending from adjacent the top of said carton at one side thereof diagonally down to and along said abutting edges to the bottom of the carton at the opposite side thereof to define lines along which said outer side flaps may be readily torn by gripping and pulling said end flaps so as to collapse said carton substantially in the plane of said bottom wall and fully expose the contents thereof.

RAYNOR M. HOLMES.