

Feb. 26, 1935.

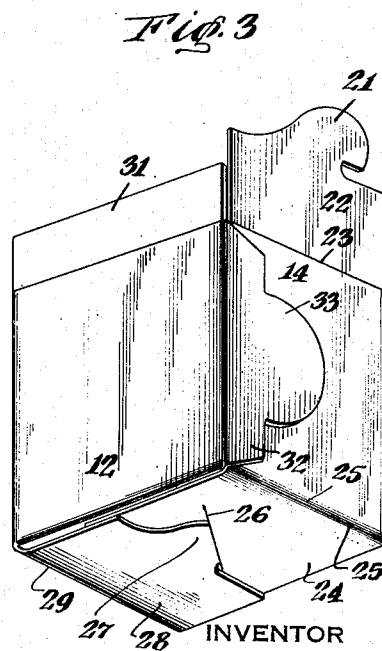
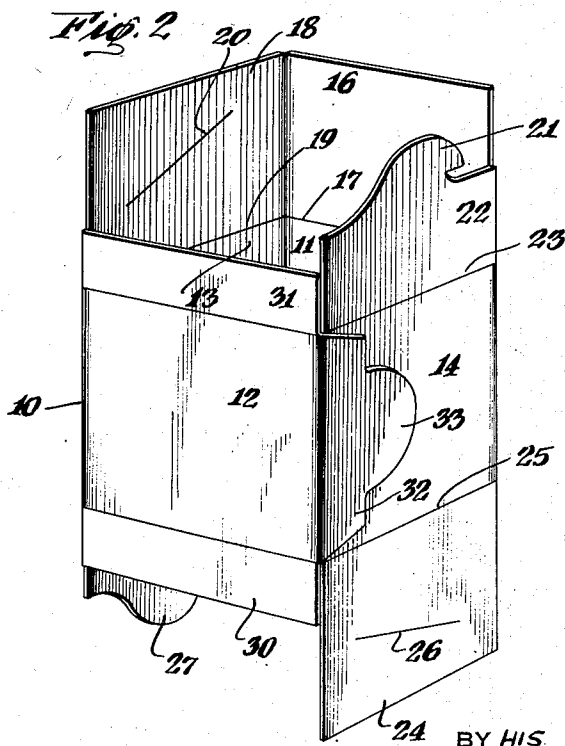
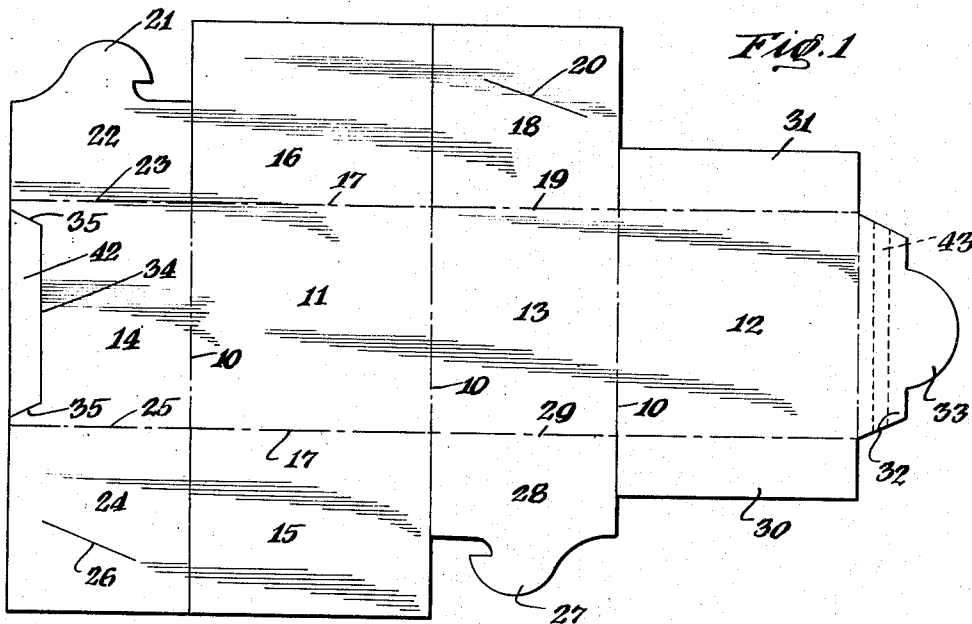
J. C. LA GRUA

1,992,222

CARTON

Filed Aug. 5, 1931

2 Sheets-Sheet 1



INVENTOR
James C. LaGrua

BY HIS ATTORNEYS

Albert M. Austin

Feb. 26, 1935.

J. C. LA GRUA

1,992,222

CARTON

Filed Aug. 5, 1931

2 Sheets-Sheet 2

Fig. 4

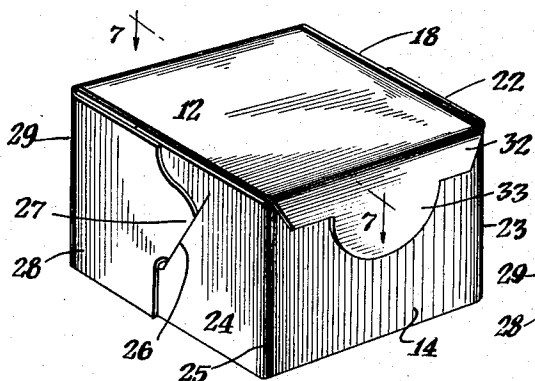


Fig. 5

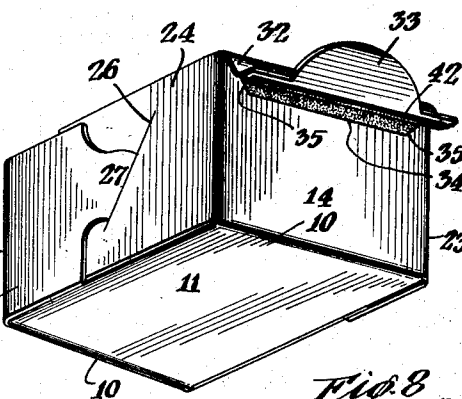


Fig. 7

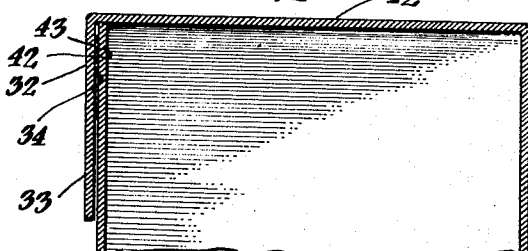


Fig. 8

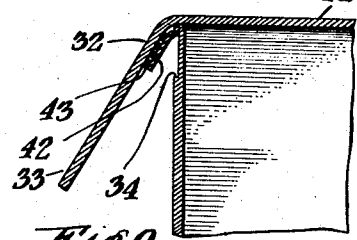


Fig. 9

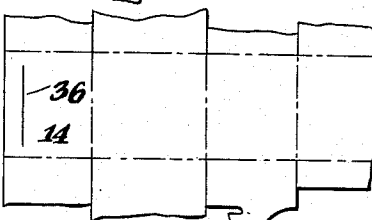


Fig. 6

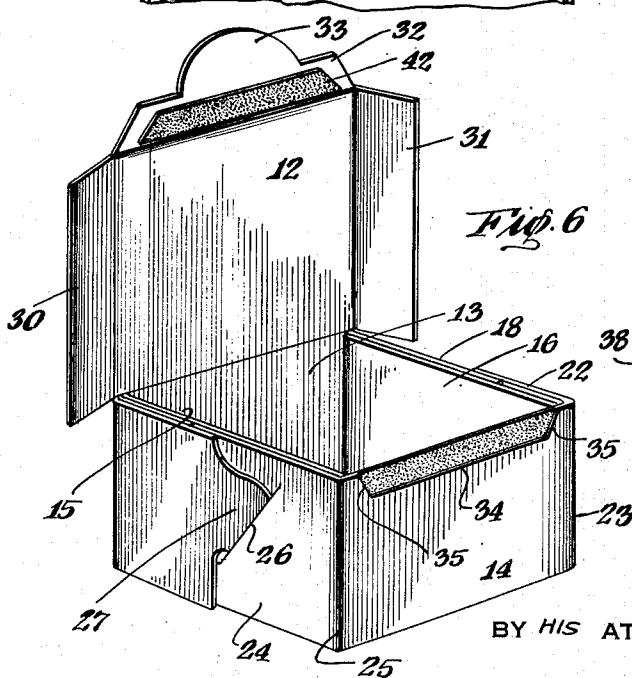


Fig. 10

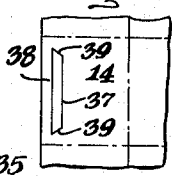
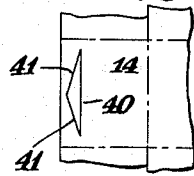


Fig. 11



INVENTOR

James C. LaGrua

BY HIS ATTORNEYS

Albert M. Austin

UNITED STATES PATENT OFFICE

1,992,222

CARTON

James C. La Grua, New Haven, Conn., assignor
to National Folding Box Company, New Haven,
Conn., a corporation of New Jersey

Application August 5, 1931, Serial No. 555,219

14 Claims. (Cl. 229—51)

This invention relates to a collapsible carton adapted for packaging ice cream, butter, cheese, and other foodstuffs and materials.

Heretofore brick ice cream has generally been frozen in brick form and wrapped after the freezing operation in a waxed paper liner. The ice cream thus wrapped is then inserted in a paper carton and the carton sealed. Ice cream manufacturers have long sought a carton which would eliminate the use of a paper liner, and which would furthermore permit pouring of the liquid cream into the container and permit freezing of the cream in the container from which the ice cream is sold, but no acceptable carton meeting these requirements have heretofore been provided. Further, the cartons now generally in use are difficult and tedious to open and unpack to effect removal of the contents, and as a result the cartons are often torn from their contents in a manner which is displeasing, time consuming, unsightly and unsanitary.

An object of this invention is to provide an unlined, contents-preserving carton which can be quickly and easily opened when it is desired to remove the contents thereof.

Another object of this invention is to provide a carton having means for easily and quickly opening the same for removal of the contents, the contents being extracted from a different side of the carton than that through which the same is inserted.

Still another object of my invention is to provide a carton for ice cream and similar material which requires no liner, and which is so constructed and made that it is capable of holding liquid material, and in which the material may be directly frozen or hardened, and which is provided with means for quickly opening the same in a sanitary and attractive manner without tearing or destroying the walls thereof.

A further object of this invention is to provide a carton formed from a single blank which can be easily, quickly and inexpensively assembled and made, and which will meet all the requirements sought for in a carton for ice cream and similar materials.

Other objects of this invention will become apparent as the disclosure proceeds.

In order that a clearer understanding of my invention may be had, reference is made to the accompanying drawings forming a part of this application.

Referring to the drawings, Fig. 1 shows the cut-out blank from which my carton is formed;

Fig. 2 shows the cut-out blank assembled into tubular form;

Fig. 3 shows the carton as it appears when ready to receive the contents with one of the end walls open and the other closed;

Fig. 4 shows the carton as it appears when closed and fully packaged;

Fig. 5 shows the carton as it appears in the process of being opened for removal of the contents;

Fig. 6 shows the carton as it appears when fully opened;

Fig. 7 is an enlarged fragmentary cross-sectional view taken on line 7—7 of Fig. 4, illustrating particularly the method used and means for removably securing the cover portion to the body portion;

Fig. 8 is an enlarged fragmentary cross-sectional view showing particularly the condition of the cover flange and body portion following the separation of the cover flange therefrom;

Fig. 9 is a fragmentary view of another cut-out blank showing a modified arrangement for removably securing the cover flange portion to the side wall of the carton;

Fig. 10 is a fragmentary view of another cut-out blank showing a further modified arrangement for securing the cover flange portion to the side wall of the carton; and

Fig. 11 is a fragmentary view of another cut-out blank showing still another modified arrangement for securing the cover portion to the side wall of the carton.

My carton is stamped from a single piece of packaging paper board, shown in Fig. 1. The outer surface of the paper board is surfaced to receive printed matter and the inner side is waxed or otherwise treated to fully preserve and protect the contents. The carton comprises generally a body portion and a cover portion, as illustrated in Fig. 6. The blank is scored along the lines 10 to define the bottom wall 11, a top wall 12, a rear side wall 13, and a front side wall 14 of the carton. End walls 15 and 16 are hinged to the bottom wall 11 along the scored line 17. The rear side wall 13 is provided with closure flap 18 hinged thereto along the scored line 19. The closure flap 18 is provided with a slit 20 into which the hooked portion 21 of the closure flap 22 is adapted to engage. Closure flap 22 is hinged to the front wall 14 along the scored line 23.

In a similar manner the opposite end of the carton is provided with a closure flap 24 hinged to the front wall 14 along the scored line 25. The closure flap 24 is provided with a slit 26 into which

the hooked portion 27 of the flap 28 is adapted to interlockingly engage. The flap 28 is hinged to the rear wall 13 along the scored line 29.

The top wall 12 is provided with side flanges 30 and 31 along the sides thereof. These flanges extend into the carton when in packaged condition. The top wall is also provided with a front flange 32 which extends over the front exterior edge of the container. A ripper-tab 33, which is grasped when the box is to be opened, extends below the front flange 32.

A very important feature of my invention is the provision of lines of weakness which may be slits or scored lines along the top edge of the front wall 14. These lines of weakness may comprise a horizontal score 34, as shown in Figs. 1 and 6, and vertical or tangential scores 35 extending from the horizontal cut to the top edge of the front wall 14. Modified scoring arrangements, as shown in Figs. 9, 10, and 11 have also been found to be practical. As shown in Fig. 9, a single horizontal score 36 which extends along the upper edge of the front wall 14 may be used. As a further modified arrangement, a pair of horizontal scores 37 and 38, as shown in Fig. 10, may be provided, with tangential end scores 39 connecting the horizontal scores. Again, as shown in Fig. 11, a single horizontal score 40 with tangential scores 41 extending therefrom to form a triangle may be provided. It is understood that I do not limit myself, however, to the specific arrangement of the score lines or slits, but any scoring or slitting arrangement which defines an area of weakness permits separation of the front flange 32 from the front wall 14 without causing damage to the top wall 12 of the carton, is contemplated within the scope of this invention. It is further understood that scored lines or slits or both may extend partially through or entirely through the wall thickness, and that such lines of weakness may be in the flange 32, or the front wall 14, or any other portion of the carton.

The scored lines or slits provide a starting point at which the front flange 32 begins to separate from the front wall 14 when the tab portion 33 is pulled outwardly and upwardly. In other words, the scored lines or slits cause the top layer 42 of the paper board forming the front wall 14 to peel, scale off or separate from the main portion of the paper board front wall and to adhere to the strip of glue 43 placed on the underside of the front flange 32, as illustrated and shown in Figs. 5, 6, 7, and 8. Since the slit provides a line of weakness in the front wall at the point where the front flange 32 is glued thereto, the front flange 32 will separate from the front wall 14 without danger of tearing or ripping the flange or tearing or ripping the top wall 12 of the carton. This arrangement permits the carton to be opened in a neat and sanitary manner, as shown in Fig. 6, without tearing or destruction of the carton body.

In the manufacture and assembly of my carton, the blank is first cut to the desired shape and size with the scored lines and slits provided therein as shown. A strip of glue 43 is then placed along the inner side of the front flange 32, as shown in Figs. 1 and 7. The blank is then folded into tubular form, as shown in Fig. 2, and the glued portion 43 is pressed into contact with the upper front edge of the front wall 14. The scores or slits in the front wall are so arranged that they fall along or through the glued portion 43 of the front flange 32.

One end of the carton is now closed by turning inwardly the side flange 30 and the end wall 15. The end flap 24 is then folded inwardly over the

side wall 15 and then the end flap 28 is folded over the end flap 24 and interlocked therewith by inserting the hooked portion 27 thereof into the slot 26 of the end flap 24. The material or cream in liquid form is then poured into the carton. The side flange 31, end wall 16 and end closure flaps 18 and 22 are then folded over and interlocked to close the carton in the manner heretofore described. The carton as packaged above may then be placed in a refrigerator and the cream or other material contained therein frozen or hardened.

When it is desired to open the carton to remove the contents, all that is necessary is to exert a slight upward and outward pull on the ripper-tab 33, which will separate the front flange 32 from the front wall 14. The outer layer 42 of the paper material comprising the front wall readily separates or scales off from the main portion of the front wall. The scored lines or slits define the margins along which this separation takes place so that a neat and clean tear appears when the flange 32 is separated from the front wall 14. It is also seen that these scored lines absolutely prevent any possible tearing, ripping or destruction of the front flange 32 or top wall 12 of the carton since the scored lines have so weakened the glued portion of the front wall 14 as to insure scaling off of the outer layer thereof along the scored lines. When the container is thus opened it is seen that the top wall 12 forms, in effect, the lid of the carton, as shown in Fig. 6. The contents can then be easily removed by turning the carton over and permitting the contents to drop out through the opening provided by the removal of the top wall 12. To further facilitate removal of the contents, end flaps 18 and 22 and end flaps 24 and 28 may be disconnected and the carton spread open into blank or sheet form.

It is now seen that I have provided an efficient and sanitary carton for ice cream, butter, cheese, and other products, which does not require any interlining for the product packaged, and is so constructed that it will hold liquids and permit freezing, curing, or drying of the product in the carton itself. It is further evident that my carton can be easily and quickly filled and packaged, and means are furthermore provided for quickly and effectively opening the same for the removal of the contents in a sanitary, pleasing and inviting manner. My carton is composed of a single blank requiring the least possible amount of material to make it, and is provided with a novel opening arrangement that is so incorporated therewith that the entire carton can be manufactured and assembled at a cost equal to the simplest box, without such improvements and advantages.

As many changes could be made in the construction of my carton above outlined, and as many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What I claim is:—

1. A carton of the character described, comprising a body portion, a cover portion, a flange element connected to one of said portions and extending over the other portion, and securing means between said flange element and said other portion, said other portion having means permitting disconnection one from the other

along a predetermined area and, without injury or defacement of the carton, said predetermined area being located below the opened free edge of said other portion.

securing said tab portion to said box portion, and means comprising a weakened area defined by lines of weakness in one of said portions and extending around the borders of said adhesive facilitating the separation of the tab portion from said box portion by causing the scaling off of a limited and predetermined part of one of said portions when the tab portion and box portion are spread apart.

9. A carton of the character described, comprising a body portion, a cover portion, a flange element extending from the cover portion and overlapping the body portion, means removably securing said flange element to said body portion, and means comprising a weakened area defined by lines of weakness in said body portion underlying said securing means facilitating the separation of the flange element from the body portion, said lines of weakness being positioned below the opened free edge of said body portion.

10. A carton for ice cream and the like, comprising a body portion, having an opening in one side wall through which contents may be inserted and an opening in another side wall through which contents may be removed, a closure portion for said contents inserting opening, interlocking releasable means for securing said closure portion in closed position, a cover portion for said contents removing opening, a flange element depending from said cover portion and overlapping said body portion, means removably securing said flange to said body portion, and means comprising weakened areas in said body portion and underlying said securing means permitting the separation of the flange element from the body portion and the opening of said cover portion without causing injury to or defacement of the carton, said means being located below the opened free edge of said body portion.

11. A carton for ice cream and the like, comprising a body portion coated interiorly with contents preserving material, said body portion having an opening in one side wall through which contents may be inserted and an opening in another side wall through which contents may be removed, a closure portion for said contents inserting opening, means overlapping one of said portions for holding said closure portion in closed position, a cover portion for said contents removing opening, means comprising a tab carried by one of said portions and adhesively secured to said other portion for removably securing said cover portion in closed position, and means comprising a predetermined weakened area in said other portion preventing injury or defacement of the carton when said cover is being released, said means being located below the opened free edge of said other portion.

12. A carton adapted to be opened into blank form to facilitate removal of the contents comprising, a paperboard blank having side wall portions held together in tubular form by a tab portion extending from one of said side wall portions and adhesively secured to another of said side walls, and means comprising a weakened area defined by lines of weakness in one of said adhesively secured portions facilitating separation of the tab portion from said side wall portion by the scaling off of a predetermined part of said weakened area, said lines of weakness being positioned below the opened free edge of said side wall portion.

13. A carton adapted to be opened into blank form to facilitate removal of the contents com-

2. In a carton of the character described, a body portion, a cover portion, a flange element connected to one of said portions and resting against the surface of the other of said portions, attaching means securing the flange to said surface, said other portion having a treated area below the joint between said portion and said flange, said area permitting disconnection of said flange and other portion along a predetermined desired course.

3. A carton of the character described, comprising a body portion, a cover portion, a flange element connected to one of said portions and extending over the other portion, means removably securing said flange element to said other portion, and means comprising weakened areas on said other portion and under said securing means permitting the separation of the flange element from said other portion without causing injury to or defacement of the carton, said predetermined area being located below the opened free edge of said other portion.

4. A carton of the character described, comprising a body portion, a cover portion, a flange element connected to one of said portions and extending over the other portion, adhesive means removably securing said flange element to said other portion, and means comprising a weakened area in said other portion and underlying said securing means facilitating the separation of the flange element from said other portion without causing injury to or defacement of the carton, said means being located below the opened free edge of said other portion.

5. A carton of the character described, comprising a body portion, a cover portion, a flange element connected to one of said portions and extending over the other portion, means removably securing said flange element to said other portion, and means comprising weakened areas underlying said securing means causing a scaling off of a predetermined area of the other portion of the carton when the flange element is separated from said other portion.

6. A carton of the character described, comprising a body portion, a cover portion, a flange element connected to one of said portions and extending over the other portion, a strip of adhesive removably securing said flange element to said other portion, and means comprising weakened areas underlying said adhesive causing a scaling off of a limited and predetermined part of the other portion of the carton when the flange element is separated from said other portion.

7. A carton of the character described, comprising a body portion, a cover portion, a flange element connected to one of said portions and extending over the other portion, means removably securing said flange element to said other portion, and means comprising a weakened area defined by lines of weakness in said body portion and underlying said securing means facilitating the separation of the flange element from said other portion without causing injury to or defacement of the carton, said lines of weakness being positioned below the opened free edge of said other portion.

8. A carton of the character described including a box portion, a tab portion extending over the box portion, a strip of adhesive removably

prising, a paperboard blank having side wall portions held together in tubular form by a tab portion extending from one of said side wall portions and adhesively secured to another of said side walls, means comprising a weakened area defined by lines of weakness in one of said adhesively secured portions facilitating separation of the tab portion from said side wall portion by the scaling off of a predetermined part of one of said portions, said lines of weakness being positioned below the opened free edge of said side wall portion, and end walls comprising flaps having hook and slot portions adapted to separably interengage one another.

14. In a paperboard carton, side walls, a hinged top wall, a flange on a free edge of said top wall, a tab on a free edge of said flange, said flange and tab resting against one of said side walls when said top wall is in place, adhesive attaching said flange to said side wall and a horizontal score on said side wall along the lower edge of said adhesive to allow the upper laminations of the paperboard material in said side wall to remain attached to said flange in case said tab is pulled outwardly or upwardly.

JAMES C. LA GRUA.