

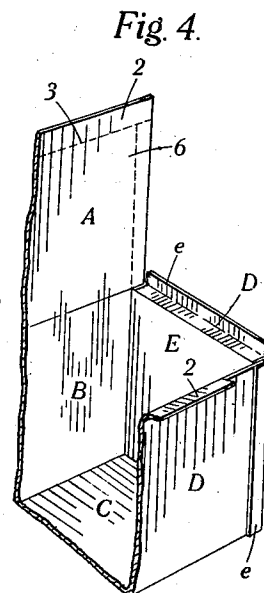
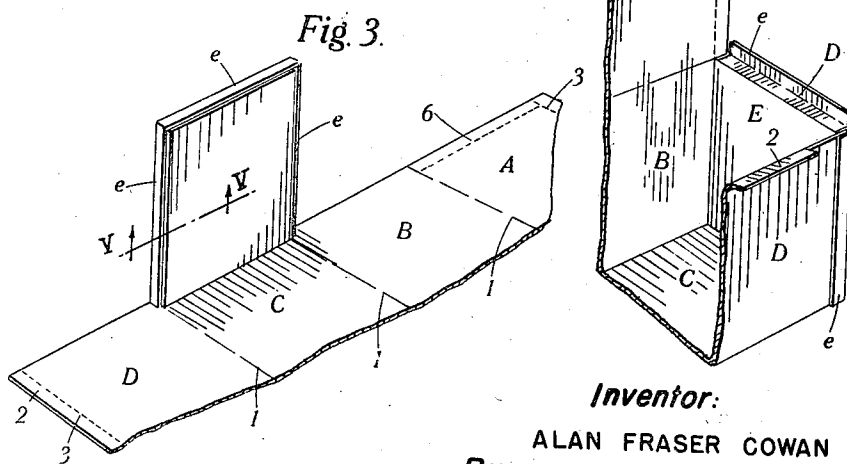
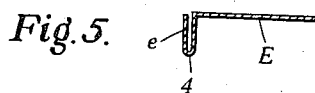
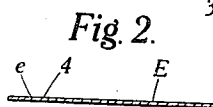
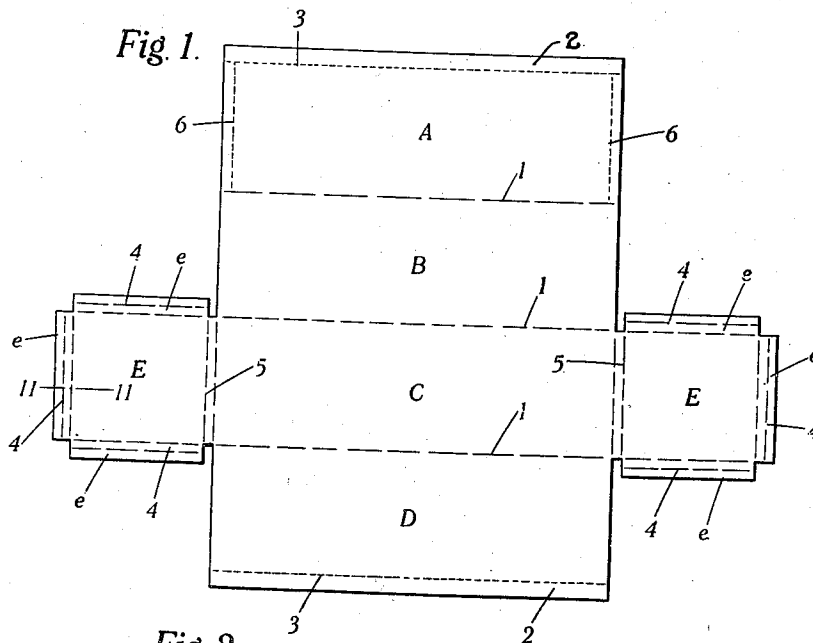
Sept. 17, 1940.

A. F. COWAN

2,215,348

CARTON FOR BISCUITS

Filed March 31, 1938



Inventor:

ALAN FRASER COWAN

By

Theodore C. Brown
Attorney.

UNITED STATES PATENT OFFICE

2,215,348

CARTON FOR BISCUITS

Alan Fraser Cowan, South Croydon, Surrey,
EnglandApplication March 31, 1938, Serial No. 199,164
In Great Britain September 7, 1936

5 Claims. (Cl. 229—51)

This invention relates to cartons for biscuits or the like.

The main object of the invention is to produce a simple, cheap and effective carton which can be easily opened, and another object is to provide a construction of carton which gives rigidity, and when required, air-tight attributes, and which will provide a sterile pack.

A carton for biscuits or the like according to the invention comprises in combination a body portion the walls of which have longitudinal edges protruding as flaps to the body, said edges being secured together to complete the body portion and inset ends having flange portions engaging over the juxtaposed end of the body portion whereby a rigid structure is obtained, each flap being perforated, slit or otherwise weakened along a line permitting the flaps to be readily torn away from the body, and the body portion being formed with weakening lines emanating from the tear line for the flaps so that the lid or a portion thereof may be torn back to provide an opening to the body portion.

The carton may be of circular or polygonal cross section, though as hereafter explained a preferred embodiment of the invention consists in the formation of a carton of rectangular cross section preferably a carton with securing ends.

The body portion and ends may be made in one piece and each end inset or the ends may be separate and made for example from sheet metal so as to enhance the rigidity of the carton.

The flange portions of the inset end may be secured to the ends of the body portion and/or the flaps may be secured together by crimping or grooving.

In order that the invention may be more clearly understood a preferred embodiment will now be described by way of example with reference to the accompanying drawing.

In the drawing:

Figure 1 illustrates the preferred form of blank for making the carton;

Figure 2 is a section on the line II—II of Figure 1;

Figure 3 is a perspective view showing the manipulation of the blank to form a carton as hereafter described, and

Figure 4 is a fragmentary pictorial view showing the carton assembled ready for filling, part of the flap on the front of the carton being broken away at the end to more clearly show the joint between the end and the walls of the carton.

Figure 5 is a section on line V—V, Figure 3.

In the drawing like references designate the same or similar parts.

Referring now to the drawing it will be seen that the blank comprises a main portion scored transversely along the line 1 to form portions A, B, C and D. The portions B and C are of equal area but the portions A and D are greater by width of the sealing flaps 2 for the carton according to the invention. The portion A of the blank provides the lid for the carton and the portion D the front, so that if the blank is folded up along the weakening lines 1 a tube of rectangular section is formed which includes a longitudinal joint where the flaps 2 on the lid and on the front of the carton overlap each other.

The portions of the blank providing the flaps 2 are made separable from the contiguous portions A, D of the blank by perforating or slitting at intervals the portions A, D to form tearing lines 3.

The ends E for the carton may be made separate but in the example shown are integral with the body of the carton, being stamped out from the same blank. Accordingly as shown in Figure 1 the blank includes lateral extensions E to the portion C, which forms the bottom of the blank. These end portions E each has a peripheral extension from each of the three free sides. The extensions are identified by the reference e and each extension is scored or creased along a medial line indicated at 4 so that each peripheral portion of the blank parts E can be folded on itself as clearly shown in Figure 5 to provide a U-shaped channel member along each free side and in order that these channels may be disposed with regard to the bottom of the carton so as to receive the juxtaposed edges of the back and front of the carton, the end portions E are creased along the lines 5 to provide hinge lines parallel with the jointing line between the bottom and end portions C and E so that each end can be folded on itself inwardly as indicated in Figure 3 on to the portion C of the blank.

The channels at the side of each end portion E terminate at the hinge line 5 so that when the end is disposed at right angles to the bottom it will be inset with regard to the back and front walls of the carton to an extent equal to the width of the strip between the hinge line 5 and the jointing line connecting the portion E with the portion C.

With the portion E folded up as indicated in Figure 3 the actual fold of the channel at each side of the end E will be disposed so that the juxtaposed edge of the back B and front D of the

carton enters the channel to the full extent thereof.

The walls of the channel may be connected to the front and back walls of the carton by using adhesive and because the ends E are inset a very rigid carton of rectangular section may be obtained, the front and back being in effect clamped to the ends E which in nature provide panelled end members, and the carton is ready for filling.

10 This condition of the carton is indicated by Figure 4 and as clearly indicated therein the top marginal portion of each end E is not fully folded over to form a channel so that the lid 3 can be folded over onto the ends E which provide a supporting edge, and the lid secured to the ends by completing the folding over of the top channel of the ends E and securing these channels by adhesive to the lid A.

To complete the sealing of the box the flaps 2, 2 are secured together, for example by adhesive. To open the carton it is merely necessary to grip the flaps 2 and tear them along the weakening lines 3, most easily effected by tearing them downwardly against the front D of the carton. To free the lid when it is clamped, as hereinbefore explained, to the ends E, the lid is formed with transverse tearing lines 6 so that the lid can be torn away from the side walls E to open the carton.

30 The tearing lines 6 are preferably immediately over the inner face E so that the tearing is easily effected along the line 6, bearing in mind that that part of the lid outside the line 6 is clamped within the channel of the end member E. The grain of the card preferably runs transversely of the carton so as to facilitate the tearing operation.

It may here be noted that the channel around the free edges of each end E is not continuous but there is in effect a slit or slot at each top corner of the end E between the channels on the top and the sides of the end. The slit or slot between the top and front channel of each end E permits the flaps 2 at the ends to be in effect straddled by the channel on each end E.

45 The carton may be cut from waxed or other proofed sheet or the carton with the lid open may be waxed or permeated with any other desired proofing material for rendering the carton airtight. When wax is employed a sterilized carton may be employed as, as soon as the wax is cool, the carton may be filled before any contamination occurs and by heat and pressure the lid may be clamped to the ends E and the flaps 2 secured together by the fusing of the films of wax on the contiguous carton portions.

50 It will be noted that the disposal of the flap 2 on the front of the box end of the open channels at the top of the ends E as well as the formation of the lid, permits the carton to be waxed by filling it with molten wax and then inverting it to drain it and that if an excess of wax is retained on the flaps it is advantageous in assuring adequate adhesive for sealing the carton.

Various modifications of the construction described may be effected in accordance with the invention, for example in addition to the employment of heat and pressure to seal the carton a crimping operation may be effected on the flaps 2 and on the top channels of the ends E when the lid has been closed down.

70 When the ends E are formed from separate pieces of material they may be of sheet metal, thus enhancing the rigidity of the carton. The metal ends may also be crimped to secure them

in position or a groove may be formed in the flanges of the metal end engaging the sides of the carton.

With such a construction a cardboard blank may be shaped and the flaps 2 secured together, for example by adhesive, and the shell so formed may then be impregnated with the proofing material whereupon one of the ends may be secured to the shell. The carton may then be filled through the open end and the second end subsequently applied to seal and carton.

One of the flaps 2 may be greater in width than the other so that the wider flap can be folded over the edge of the other flap to provide an additional seal. Further the tearing lines, such as 6, need not be parallel to the ends E but may be disposed according to the opening required to reach the contents of the carton. For example a single tearing line may be provided of straight or curved form to permit the partial opening of the lid or to tear an opening therein.

Further although the flanges 2 in the construction described extend to the length of the carton, obviously they may extend for the end portions only; in such arrangement the marginal strip of the lid may be slit so as to provide a middle flap turned inwardly to enter the box whilst the ends of such flap form the sealing flap for the lid according to the invention.

Further, although in the construction described a carton of rectangular form is mentioned, obviously the tubular body of the carton may have a cylindrical or polygonal section and where the carton is of cylindrical section the tearing lines to provide the opening will be formed in the wall as desired.

The carton may be stitched along the tearing lines so that by pulling the thread, tearing along those lines is readily effected.

What I claim is:

1. A carton comprising a front wall and a top wall, integral flaps extending from each of said walls and defined on their edges adjacent the walls by tearing lines, said flaps projecting away from and lying out of contact with each of said walls, and sealing means joining the flaps, whereby the flaps together form a readily graspable tab which may be easily torn from the walls to open the carton.

2. In a carton the combination with a body having top and front walls and integral flaps defined by tearing lines extending from each of said walls, said flaps projecting away from and lying out of contact with said walls, and weakening lines in the body joining said tearing lines, of ends adapted to form with said body a closed carton, each end comprising an end wall and integral flanges of U-section extending from the periphery of the wall and embracing the walls of the body, whereby the end walls are spaced inwardly from the ends of the body to provide a carton of such rigidity that the flaps may be readily torn from the body walls to open the carton.

3. A carton according to claim 2 wherein the body is formed of cardboard having its grain running transversely of the carton to facilitate the tearing operation.

4. A carton according to claim 2 wherein the flange portions of the inset ends are secured by crimping.

5. A carton according to claim 2 wherein the flaps are secured together by crimping.

ALAN FRASER COWAN.