

Sept. 26, 1939.

R. H. O'BRIEN

2,174,179

CARTON

Filed Feb. 1, 1939

2 Sheets-Sheet 1

FIG. 1.

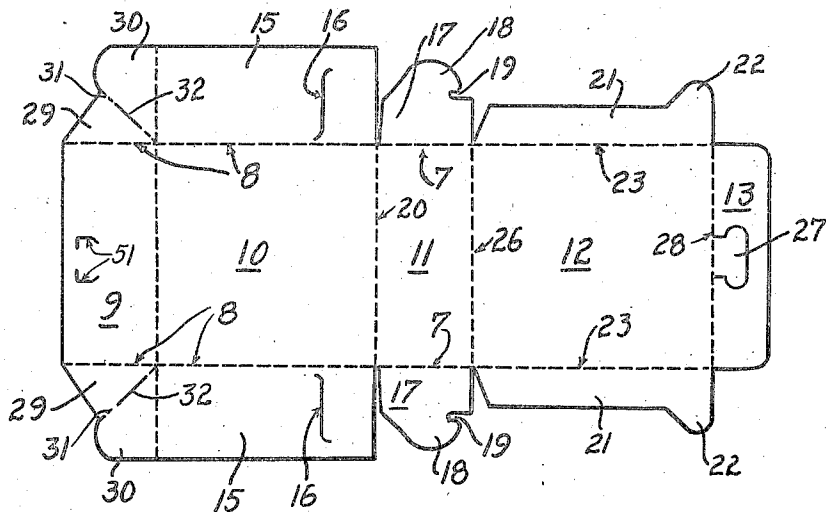


FIG. 2.

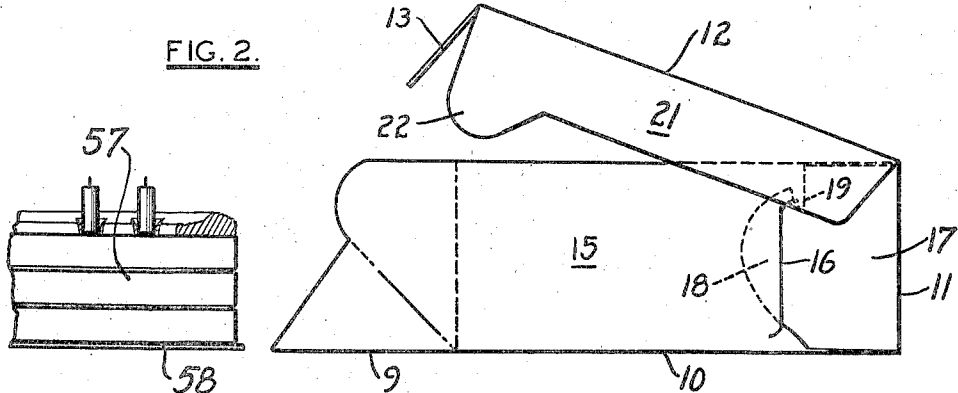
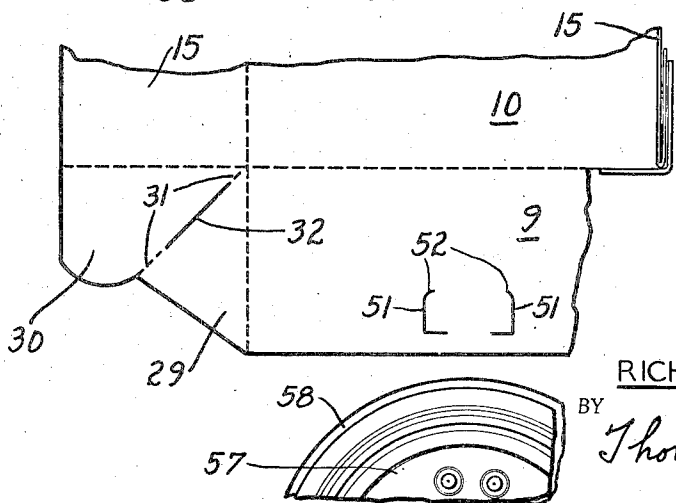


FIG. 3.



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FIG. 4.

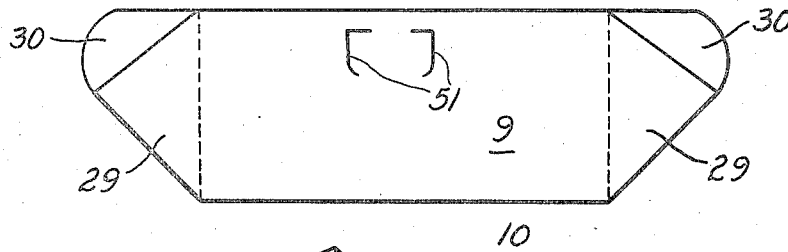


FIG. 5.

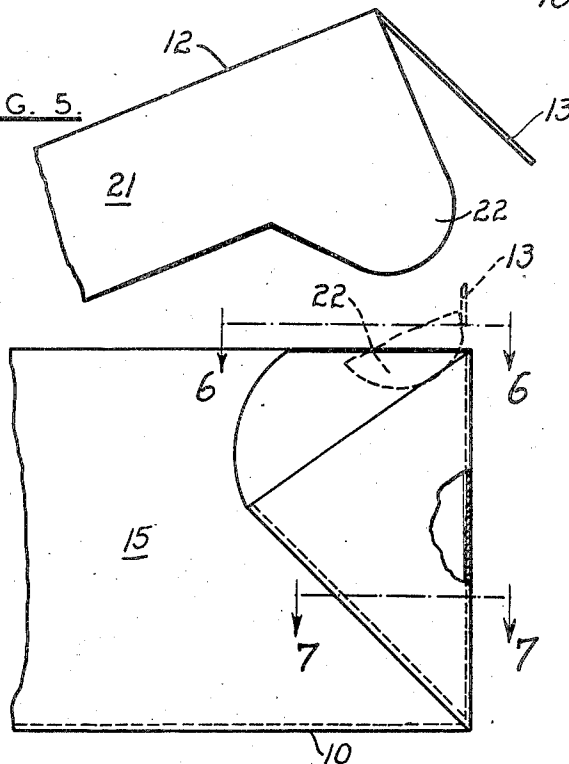


FIG. 6.

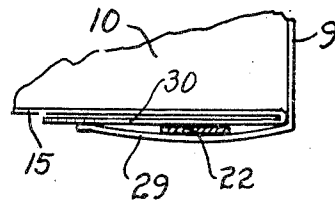


FIG. 7.

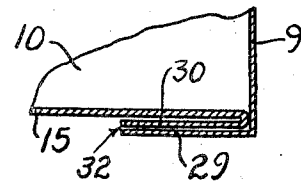


FIG. 9.

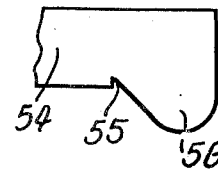
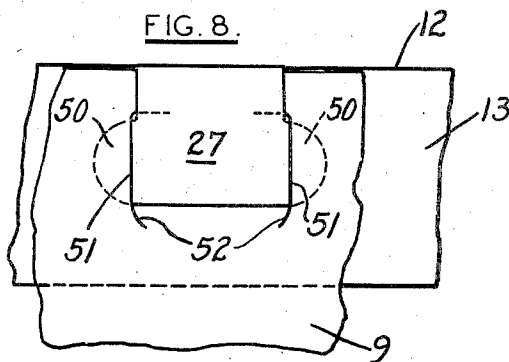


FIG. 8.



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CARTON

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Application February 1, 1939, Serial No. 254,000

9 Claims. (Cl. 229—31)

My invention relates generally to cartons, and more particularly to a box or carton which has a hinged side whereby entry or removal of delicate or fragile goods or merchandise, such as pastry, is facilitated.

Briefly described, one side wall of the carton is hinged so as to lower to a flat position thus permitting passage of the cake, pie or the like thereover without any lifting movement. This is a very material feature of my invention inasmuch as it greatly aids in avoiding mutilation of the merchandise.

Another feature of the invention resides in the outwardly folding webs whereby they serve as pockets to receive retaining means which prevents accidental lowering of the hinged wall or side.

Additionally, these pockets have tapered sides contacting the depending top tabs whereby the top of the box is directed toward and held in its correct and exact position. More specifically, the depending top flap is held between the hinged wall and the doubled front edges of the side walls.

Yet another advantage resides in the cutting away of the webs so that the outer walls of the locking pockets are positioned below the inner walls, the inner walls thus serving as guiding faces for the pockets. Also, the incline of the outer walls aids in easy entry of the tabs on the upper side walls.

Another feature is the rounding of the depending tabs so as to prevent any curling thereof, this flatness permitting their easy and efficient entry into their pockets.

Another feature is my association of a locking means for the medial part of the hinged wall and the adjacent wall, this locking means comprising only slits in the hinged wall, and these slits having their inner terminal portions at an angle to the direction of outward removal movement of the cake or the like whereby any distortion of the locking means from the original plane of the front wall will not cause any snagging to occur between the plate or paper carrying the cake and the front wall. It is to be noted that the locking means is initially flat and remains so until after entry of the article into the box and upward and locking movement of the front wall.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved paper box whereby certain important advantages are attained and the device is rendered simple, inexpensive and convenient and advantageous for use, all as will be hereinafter more fully set forth.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Fig. 1 is a plan view of a blank from which a

box may be constructed in accordance with and as an embodiment of my invention.

Fig. 2 is a side view of the box in partially folded position.

Fig. 3 is a fragmentary plan view, somewhat enlarged, showing the details of the novel corner construction.

Fig. 4 is a front view of the box in partially folded position.

Fig. 5 is a fragmentary side view, substantially full size, showing the top of the box ready for movement to closed position.

Fig. 6 is a fragmentary sectional view taken along the plane of the line 6—6 of Fig. 5.

Fig. 7 is a fragmentary sectional view taken along the plane of the line 7—7 of Fig. 5.

Fig. 8 is a fragmentary front view showing the locking means between the lid and the front side of the box.

Fig. 9 is a fragmentary view disclosing a modification of the lid locking tab.

Similar numerals refer to similar parts throughout the several views.

As shown in Fig. 1, the complete box blank consists of a front wall 9, a bottom 10, a back 11, a top 12, and a flap 13, these portions being arranged in series as shown in Fig. 1.

The bottom 10 has side flaps 15, slit as indicated at 16. These side flaps fold upwardly at right angles to the bottom 10 along the scored lines 8. The back 11 has side flaps 17 curvably extended at 18 and notched at 19. As shown in Fig. 2, the flaps 17 are folded forwardly about scored lines 7 after the back 11 has been folded upwardly about the dotted line 20, this dotting indicating a scoring, and the curved portions 17 enter the slits 16 to lock these several members in position.

The top 12 has flaps 21 provided with tabs 22, and these flaps are folded downwardly about the dotted or scored lines 23 after the complete top portion is folded about the line 26. These flaps 21 lie on the outer sides of the flaps 15. See Fig. 2.

The flap 13 has a locking element 27. Both the locking element 27 and the flap 13 fold downwardly about the dotted line 28, but they go on opposite sides of the front wall 9.

The flaps 15, previously referred to, extend forwardly and are connected onto the flap 9, the interconnecting portions or web consisting of triangular portions 29, and substantially triangular portions 30. Between each of the portions 29 and 30 a score 31 and a slit 32 are formed. See Fig. 3.

The webs are folded together by pushing the intermediate creases or scores outwardly and this causes the flap 9 to raise to a position as shown in Fig. 4. Prior to this movement the box is as shown in Fig. 2. That is, the sides 15 have

been folded upwardly so as to lie at right angles to the bottom 10 and the flap 9. Also, the back 11 has been folded upwardly at right angles to the bottom 10, the flaps 17 having been folded inwardly so that their terminals enter the slits 16, and the top 12 is positioned above the bottom member 10. See Figs. 2 and 5.

The next step is the folding rearwardly of the doubled flaps, 29, 30, from their position as shown in Fig. 4 so as to lie alongside of the sides 15. See Figs. 5, 6, and 7.

When in this position the upper side flaps 21, these being folded downwardly to assume a position outside of the flaps 15, cause the tabs 22 to enter between the web portions 29 and 30. The start of this entry is indicated in dotted lines in Fig. 5 of the drawings. The front flap 13 may enter inside of the lower front flap 9. The locking means 27, carrying the ears 50, see Fig. 8, is locked onto the front flap 9, the ears entering the slits 51 formed in the front 9. See Figs. 4 and 8.

As is shown in Fig. 8, the inner ends of these slits 51 are curved at 52, this providing against having any abrupt obstruction in the path of the plate or the like which carries the wedding cake or the like. That is, even though the portion of the flap 9 encircled by either of the slits 51 may be raised, nevertheless it will be gradually forced downwardly to an unobstructive position by a gradual camming action between the encircled portion and the bottom of the cake carrying means.

Fig. 9 indicates a modified form in which the upper side flap 54, corresponding to the side flap 21, has a notch 55 adjacent its tab 56, this notch serving to receive the lower edge of the locking pocket. Thus additional means are provided for preventing shifting of the top member.

As will be appreciated, the box may be folded to its partly closed position as indicated in Fig. 2, and the cake 57, or pie, or pastry, as the case may be, carried by the support 58, may be slid to a position inside of the carton without the slightest mutilation thereof, and, perhaps of more importance, the cake may be expediently removed by the housewife or other purchaser, without reaching downwardly around the same. In other words, the box may be unlocked by means of the locking tab 27 whereupon the front wall 9 is pulled downwardly to assume a flat position as shown in Fig. 2 of the drawings and the cake is easily slid out.

From the foregoing description, it is thought to be obvious that a paper box constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which its contents may be entered and removed, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

Having thus revealed this invention, I claim as new and desire to secure the following combinations and elements, or equivalents thereof, by Letters Patent of the United States.

What I claim is:

1. A carton comprising bottom, back, top and flap sections hingedly connected together in series, sides extending upwardly from the bottom, additional sides extending downwardly from the top, portions joined to and between each of the first mentioned sides and the adjacent end of the flap section, said portions being folded along the first mentioned sides to form pockets and means, connected to the additional sides, receivable into the respective pockets.

2. A carton comprising a bottom and a top, sides extending up from the bottom to the full height of the carton, additional sides extending downwardly alongside of the first mentioned sides for a relative short distance with respect to the height of the carton, a web between each of the sides of the bottom and the ends of the adjacent flap section, said web being foldable rearwardly to form a pocket and means on the additional sides for entering the said pockets.

3. A carton as set forth in claim 2 in which the said pockets and the means entering the same are provided with means for causing the top to move forwardly to its properly closed position, if necessary, as it is moved downwardly.

4. In combination, a carton having a bottom and four sides, one of the sides being hinged onto the bottom, webs between the hinged side and the ends of the adjacent sides, each of said webs having a score extending from the adjacent corner whereby the web may be folded alongside of the outer face of the adjacent side, a lid adapted to be swung downwardly to a position juxtaposing the top edges of the several sides, and means on the lid adapted to enter between the inner faces of the webs.

5. A combination of elements as set forth in claim 4 in which a portion of the web immediately adjacent the hinged side is cut away and the remainder of the web is rounded.

6. In a corner construction for a box, a bottom having intersecting sides, a web connecting the same, a top having a depending flap, the web being of sufficient length to permit one of the sides to assume a position in the plane of the bottom, a score in the web to permit its lateral movement and also to be swung to a position alongside of the other of said sides, the top flap having a projection receivable into the space between the inner faces of the web.

7. A corner construction as set forth in claim 6 in which the receivable projection is cut at an angle for the purpose described.

8. A corner construction as set forth in claim 6 in which the flap carrying the projection has a notch adjacent thereto to receive the edge of the pocket for the purpose described.

9. In an article of the character described comprising a bottom construction having a bottom and side walls connected thereto, a front wall hinged to the front edge of the bottom, folding webs connecting the edges of the front wall onto the side walls whereby the same may be moved from a position in a plane of the bottom member upwardly to a position whereby it closes the front of the construction, said webs being movable to a position alongside of the side walls, a top construction comprising a top member and depending means for engaging the webs at points spaced from the junctures of the front wall and the side walls to prevent downward movement of the front wall.

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