Dec. 26, 1933. B. J. DAVIDSON 1,940,848

ADJUSTABLE BOTTOM FOR CONTAINERS

Filed June 15, 1932

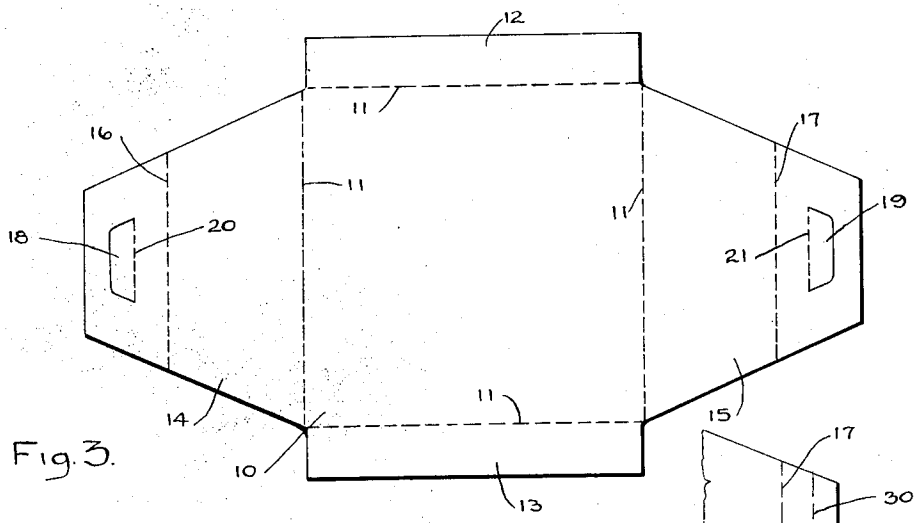


Fig. 3.

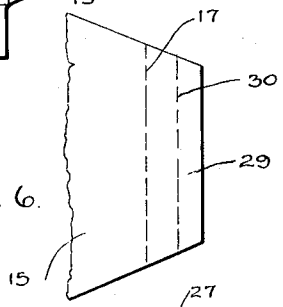


Fig. 6.

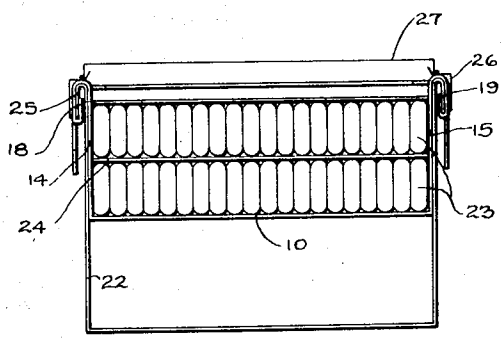


Fig. 2.

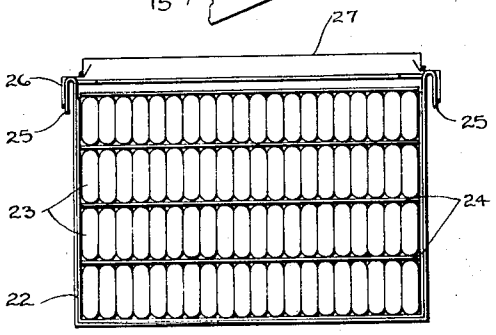


Fig. 1.

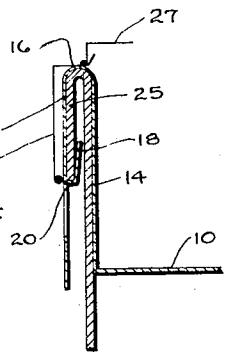


Fig. 4.

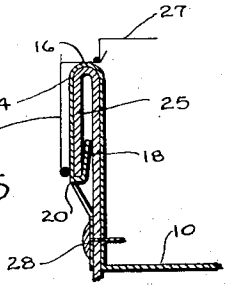


Fig. 5.

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Patented Dec. 26, 1933 1,940,848

UNITED STATES PATENT OFFICE

1,940,848

ADJUSTABLE BOTTOM FOR CONTAINERS

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Application June 15, 1932. Serial No. 617,300

7 Claims. (Cl. 206—44)

My invention relates to containers for various classes of goods such as cookies, biscuit, cigars, candy, and other small articles of merchandise, which customarily are packed in layers or rows in the boxes, and sold in relatively small quantities to the customers. When the top layers have been sold, and the box is only partly filled, its contents are poorly displayed, and also customers sometimes pass by a partly filled box when their attention would be drawn to a full box.

This is particularly true in the case of biscuit and other bakery products that are packed in relatively deep cartons and provided with glass-front display covers. Because of the relatively great depth of these boxes and the covers attached thereto, the goods are very poorly displayed when the boxes become only half full or less. Among the objects of my invention is to provide an adjustable bottom for a biscuit carton or the like, which will be inserted in the box when the goods are being packed, but will not occupy any appreciable amount of space or decrease the capacity of the carton, and yet can be raised and secured by cooperative action of the overhanging flaps or flanges of the carton and the frame of the display cover to effectually display the remaining goods when the contents of the box have been partly sold.

Referring now to the drawing forming a part of my specification, Fig. 1 is a cross-sectional view of a carton embodying my invention and filled with biscuit.

Fig. 2 shows the carton after a part of the biscuit have been sold and the adjustable bottom has been raised.

Fig. 3 shows the blank from which the adjustable bottom preferably is made.

Fig. 4 is an enlarged view of the upper left-hand corner of Fig. 2.

Fig. 5 is a view similar to Fig. 4 showing a temporary holding means which is used when the contents of the box are heavy.

Fig. 6 shows one end of a modified form of blank.

Referring to Fig. 3 of the drawing, the adjustable bottom is formed from a single piece of cardboard or other suitable material having a bottom 10 of such a size as to fit closely but yet to be freely movable within the carton, the bottom being defined by score lines 11 which provide side flanges 12, 13, and two opposite lifting flaps 14, 15 which are adapted to be bent upward along the score lines 11 so that they are perpendicular to the bottom 10 and fit closely inside the carton. The flaps 14, 15 are shown trapezoidal in outline, but may be rectangular or any other desired shape, each of them having a transverse score line 16, 17 intermediate its ends, and near its upper end a tongue 18, 19 which is cut out on three sides and joined to the flap on its fourth side along a score line 20, 21. The flaps 14, 15 not only serve as a means for supporting the adjustable bottom in raised position, but they, together with the flanges 12, 13, stiffen and strengthen the bottom 10, and also prevent rubbing of the cakes on the sides of the carton.

In using my invention, the blank shown in Fig. 3 has the flanges 12, 13 turned up at right angles and also the flaps 14, 15, and is then inserted in the box or carton 22 with the bottom 10 resting on the bottom of the box, and the flanges and flaps lying in contact with the sides of the box. The flaps 14, 15 extend toward the top of the box, which is then filled with biscuit 23 in layers separated by plates 24. At the top of the box, or "Q", as it is called in the trade, there is an outwardly and downwardly extending flange or extension 25 on each side, over which the metallic frame 26 of a display cover is fitted. The display cover has a hinged cover 27 with a glass top through which the contents of the box are visible and affords easy access thereto.

When a considerable part of the contents of the box has been sold, for example, about one-half, the display cover is removed and the merchant will then take hold of the top edges of the flaps 14, 15 and lift them up so as to raise the bottom 10 and the remaining contents of the box. The flaps are raised up until the score lines 16, 17 are approximately even with the top of the box, when they are bent down over the flanges 25, and the tongues 18, 19 inserted under the flanges 25, as best shown in Figs. 4 and 5. The display cover 26 is then slipped back over the flanges 25 so that the box and its contents appear as in Fig. 2. In case the contents of the box are heavy, or the flanges 25 tend to bend outward, so that the tongues 18, 19 cannot securely hold the bottom in adjusted position, a thumb tack 28 may be inserted through each flap and the side of the box, as shown in Fig. 5, to temporarily hold it in place until the frame 26 is again placed over the flanges, which will then prevent the flanges 25 from bending up and releasing the tongues 18, 19. The thumb tack 28 can then be removed. Ordinarily the thumb tacks will not be necessary, but are used temporarily in cases where either the weight of the contents or resiliency of the flanges 25 causes them to turn outward or upward from their positions as shown in Figs. 2 to 5.

It has been found in some cases where the material in the flaps 14, 15 is not very strong, or when the contents of the carton are heavy, that the flaps may tear outwardly from the ends of the score lines 20, 21. In order to overcome this, and still use light and cheap material, I have shown the modified form of Fig. 6, wherein the tongues 18, 19 and score lines 20, 21, are replaced on each flap by a tongue 29 and a score line 30, the latter extending the full width of the end flap.

The distance between the score lines 17, 30 is approximately equal to the width of the flanges 25 on the carton. In using this form of the invention, the bottom 10 will be raised by the flaps until the score lines 16, 17 are adjacent the top of the carton. The flaps are then bent outward on the score lines, and the tongues 29 turned in on the score lines 30 and tucked under the flanges 25, just as shown for the tongue 18 in Figs. 4 and 5. The frame 26 of the display cover is then replaced over the flanges 25 which prevents their turning outward to release the tongues.

Cartons of the kind herein shown are shipped with the flanges 25 turned horizontally inward over the contents and the top is closed by a cardboard cover. When the box is opened the flanges are turned outward and downward so that the cover frame 26 can be slipped over them as shown in Figs. 1 and 2. These cartons or Q's, as they are called in the trade, are made from strong and heavy waterproof duplex board that is quite stiff and possesses considerable resilience so that the flaps 25 always tend to return to vertical position. This resilience of the material from which the cartons are made causes the lower edges of the flanges 25 to exert considerable pressure outward and to pinch or grip the flaps 14, 15 against the bead formed on the inside lower edge of the cover frame 26 as clearly shown in Figs. 4 and 5. When the contents of the carton are not of too great weight, this pressure against the flaps 14, 15 between the flanges and frame, together with the frictional resistance between the flaps and top edge of the carton, is sufficient to hold the merchandise in raised position. For heavier merchandise, it is desirable to tuck the tongues under the flanges to aid in resisting the heavier pull.

Having thus described and illustrated one form of my invention, what I claim and desire to secure by Letters Patent is:

1. The combination with a rectangular container having outwardly turned top flanges, of an adjustable bottom for said container, side flaps secured to said bottom and lying adjacent opposite sides of the container, each flap having a tongue intermediate its ends adapted to be engaged under one of said top flanges to hold the adjustable bottom above the bottom of the container.

2. The combination of a carton having straight sides, downwardly projecting extensions at the top of the carton, an adjustable bottom in the carton, lifting means secured to said bottom and being disposed adjacent the sides of the carton, tongues on said lifting means adapted to engage under said extensions when the bottom is lifted.

3. The combination with a rectangular container having outwardly turned top flanges, of an adjustable bottom for said container, side flaps secured to said bottom and lying adjacent opposite sides of the container, each flap having a tongue intermediate its ends adapted to be engaged under one of said top flanges to hold the adjustable bottom above the bottom of the container, and a frame fitting over the top of the carton and said flanges.

4. The combination of a carton having straight sides, downwardly projecting extensions at the top of the carton, an adjustable bottom in the carton, lifting means secured to said bottom and being disposed adjacent the sides of the carton, tongues on said lifting means adapted to engage under said extensions when the bottom is lifted, and means preventing said extensions from turning outwardly when engaged by said tongues.

5. The combination with a carton having downwardly turned top flanges, of an adjustable bottom therefor, lifting flaps secured to said bottom, each flap having a score line intermediate its ends and a tongue beyond said score line, said flaps being adapted to be bent on said score lines and said tongues engaged under said flanges when the bottom is in raised position, and means for preventing outward turning of said flanges when engaged by said tongues.

6. The combination with a rectangular container having outwardly and downwardly turned top flanges, of a display cover closing the top of said container and having a frame extending downwardly over said top flanges, an adjustable bottom in said container having side flaps extending upwardly therefrom, said flaps being folded over the top of said container and extending between said top flanges and frame of the cover, said flanges and frame cooperating with said flaps to hold the adjustable bottom above the bottom of said container.

7. The combination with a rectangular container having outwardly and downwardly turned top flanges, of a display cover closing the top of said container and having a frame extending downwardly over said top flanges, an adjustable bottom in said container having side flaps extending upwardly therefrom, said flaps being folded over the top of said container and extending between said top flanges and frame of the cover and being tucked between said top flanges and container, said flanges and frame cooperating with said flaps to hold the adjustable bottom above the bottom of said container.

BRUCE J. DAVIDSON.