Feb. 18, 1947. C. J. COLEMAN 2,415,869

CARTON

Filed Sept. 11, 1943

Fig. 1.

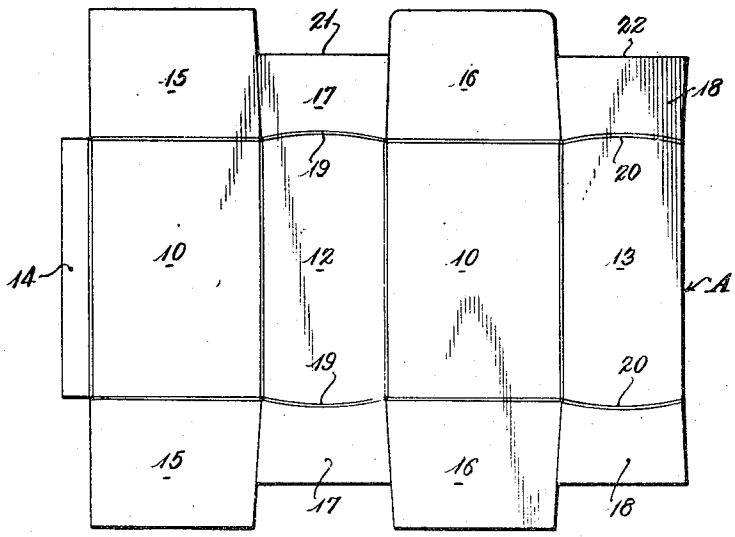


Fig. 2.

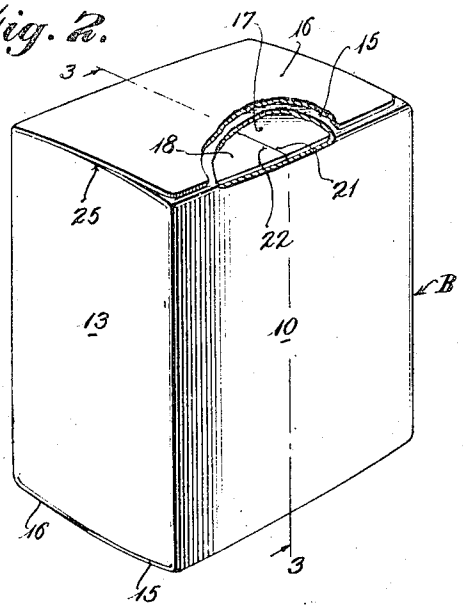
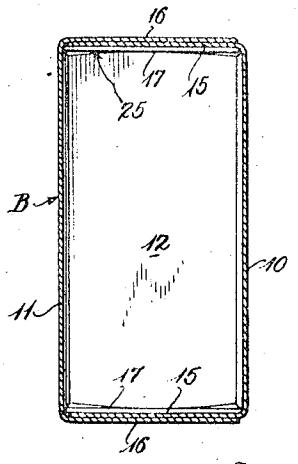


Fig. 3.



Inventor

Charles J. Coleman

By C. H. Seeley

Attorney

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CARTON

Charles J. Coleman, Chicago, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware

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5 Claims. (Cl. 229—37)

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The invention relates to paperboard cartons, and more particularly to an improved end construction for seal end cartons of rectangular cross section, which construction is designed to provide a satisfactory seal for the end of the carton where a bottom sealer is not employed, as where the end is sealed after the carton has been packed, and is filled with goods.

In accordance with my invention the score lines separating the relatively short inside end flaps from the body of the carton are curved so that when the flaps are folded down they tend to bulge upwardly, thus providing a firmer base for attachment of the elongated outer sealing flaps.

Another feature of the invention resides in the outward tapering of the short inside end flaps from their lines of juncture with the body to their outer ends, which construction also tends to increase the resistance to downward movement of the flaps, thus improving the seal.

The invention will be more readily understood by reference to the accompanying drawing and the following detailed description, in which are set forth by way of illustration a specific embodiment of the inventive thought.

In the drawing:

Fig. 1 is a plan view of the carton blank embodying the invention;

Fig. 2 is a perspective view of the completed carton; and

Fig. 3 is a section taken on line 3—3 of Fig. 2.

The blank embodying the invention is designated generally at A in Fig. 1, and the box or carton formed therefrom is represented at B in Figs. 2 and 3.

As shown, the blank A is of generally rectangular shape including a body portion which is adapted to be folded and sealed into tubular form, and which is provided with closure flaps on each end thereof. Referring to Fig. 1 in more detail, the body portion of the carton blank comprises front and rear wall panels 10 and 11 and side wall panels 12 and 13, the respective panels being separated from one another by suitable score lines in the usual manner.

A relatively narrow attaching flap 14 is connected to the front panel 10 and provides means for securing the carton in tubular form during the setting up of the carton.

The front wall panel 10 is shown as provided with closure flaps 15, 15 on opposite ends thereof, and similarly the rear wall panel 11 is provided with closure flaps 16, 16. The end walls 12

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and 13 are provided with relatively shorter flaps 17, 17 and 18, 18.

In accordance with the present invention the score lines 19 and 20 which separate the flaps 17 and 18 from the side walls 12 and 13 are upwardly curved so that when the flaps 17 and 18 are bent over in setting up the box an outward bulge 25 is insured, as indicated in Fig. 2. It will be further noted that the flaps 17 and 18 flare outwardly from the score lines 19 and 20 to the outer ends 21, 22 of said flaps 17 and 18 respectively.

In assembling the carton the body portion is first folded to tubular form and adhesively secured in such form by means of the attaching flap 14, which is glued to the flap 13.

In closing the ends of the carton the relatively short flaps 17 and 18 are first bent downwardly about the curved score lines 19 and 20, thus providing an outward bulge 25 as indicated in Fig. 2. It will be noted that the flaps 17 and 18 are of sufficient length so that they meet at the center of the box when folded over. Owing to the outward taper of the flaps 17 and 18 from their lines of juncture with the body portion it will be apparent that a resistance is offered to downward movement into the interior of the box. The combined effect of the curved score lines 19 and 20 and the outward tapering of the flaps 17 and 18 is to provide a more effective sealing surface for the outer flaps 15 and 16, which are folded downwardly and sealed upon the flaps 17 and 18. Either flap 15 or 16 may be folded down first, the order of folding of these two flaps being immaterial. When, however, the flaps are folded down the resistance to downward pressure of the flaps 17 and 18 is sufficient to insure a proper seal, it being assumed that suitable adhesive has been applied to the respective closure flaps.

While, in accordance with the present invention, it is preferred to combine the features of the curved score lines 19 and 20 and the outwardly tapered flaps 17 and 18, it will be apparent that each of these features independent of the other offers certain advantages, although the most satisfactory seal is obtained when both features are employed in conjunction with each other.

While in the invention as herein described the two ends of the carton are similarly formed, it will be apparent that only one of the ends need necessarily be provided with curved score lines and tapered flaps since prior to filling the carton bottom sealing means may be employed if desired.

the curved score lines and tapered flaps being intended primarily for use in connection with sealing the end of an already filled carton in connection with which no bottom sealing means can be employed.

It will be apparent that in accordance with the present invention an improved quality of seal is insured along the curved score lines 19 and 20 of the inside flaps owing to the outward bulge resulting therefrom. It will be further apparent that an improved quality of seal over the entire surface of the end flaps is insured by reason of the resistance to downward pressure offered by the outwardly tapered form of the flaps 17 and 18.

In practice the curvature of the score lines 19 and 20 is somewhat less than that indicated in the drawing, and similarly the amount of taper has been shown in somewhat exaggerated form in the drawing for the purpose of illustration.

A specific embodiment of the invention has been described in detail for the purpose of illustration, but it will be apparent that numerous modifications and variations may be resorted to without departing from the spirit of the invention.

I claim:

1. In a seal end carton, an inner sealing flap connected to the body of the carton by a curved score line bulging outwardly intermediate its ends, and an outer sealing flap connected to the body of the carton and adapted to be sealed to the outwardly bulged inner sealing flap.

2. In a seal end carton of rectangular cross section, an inner sealing flap connected to one of the side walls of the carton by an outwardly curved score line and an outer sealing flap secured to an adjacent wall and adapted to be sealed to the inner sealing flap.

3. In a seal end carton of rectangular cross section, a pair of short inner sealing flaps secured to opposite walls of the carton along outwardly curved score lines, an outer sealing flap hinged to the body of the carton at right angles to the inner flaps and adapted to be sealed thereto.

4. In a seal end carton of rectangular cross section, a pair of short inner sealing flaps secured to opposite walls of the carton along outwardly curved score lines, an outer sealing flap hinged to the body of the carton at right angles to the inner flaps and adapted to be sealed thereto, the inner flaps flaring slightly from the score lines outwardly to the free ends of the flaps.

5. In a seal end carton, an inner sealing flap hingedly secured to the body portion of the carton and flaring outwardly from its hinge line to its free end, and an outer sealing flap hingedly secured to the body portion of the carton on each side of said inner flap adapted to be folded and sealed over said inner flap, the width of said inner flap at the widest portion thereof being greater than the distances between the hinge lines of said outer flaps at the portions thereof adjacent said widest portion, whereby said inner flap is bowed outwardly by engagement between said hinge lines to urge said folded outer flaps into securely sealed relation.

CHARLES J. COLEMAN.

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