June 14, 1960 R. A. EASTER 2,940,654

CONTAINER

Filed Sept. 18, 1958

Fig. 1

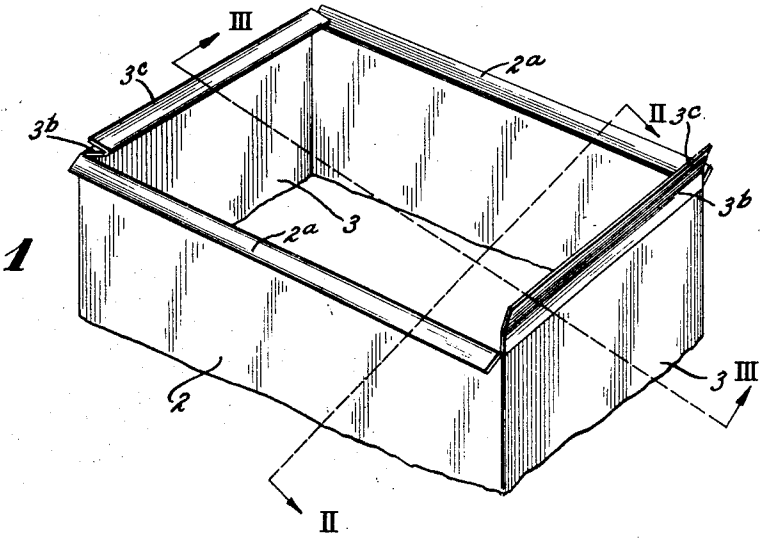


Fig. 2

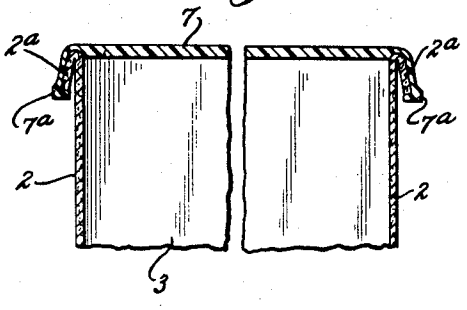
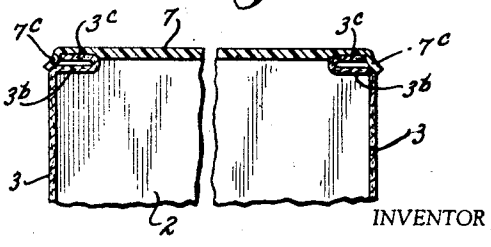


Fig. 3



INVENTOR

Ross A. Easter

BY

ATTORNEY

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CONTAINER

Ross A. Easter, Minneapolis, Minn., assignor to The Pillsbury Company, a corporation of Delaware

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4 Claims. (Cl. 229—43)

This invention relates to containers, and more particularly to a carton with a thermoplastic cover which is applied thereto in a novel manner.

In numerous industries, such as those which are concerned with foodstuffs, there is considerable demand for a container which is both sift-proof and leak-proof, and which is, for the most part, constructed of fibrous materials, rather than of metal or glass.

It is among the objects of the present invention to provide an efficient container of the type referred to hereinabove which is simple and inexpensive.

The invention, then, comprises the features hereinafter fully described and as particularly pointed out in the claims, the following description and the annexed drawings setting forth in detail certain illustrative embodiments of the invention, these being indicative of some of several ways in which the principles of the invention may be employed.

In said drawings:

Figure 1 is a perspective of the upper portion of a carton minus the top closure which has been constructed in accordance with the teachings of the present invention;

Figure 2 is a transverse sectional elevation taken along the line II—II of Figure 1; and

Figure 3 is a longitudinal sectional view taken along the line III—III of Figure 1.

Referring more particularly to the drawings, the numeral 2 designates the side walls of a rectangular folding carton or box the same having end walls 3. The aforementioned portions of the folding carton and the bottom (not shown) are of such construction and arrangement as to render them sift-proof and leak-proof, as by means of any of the protective coatings which are known in the art.

As previously mentioned, the teachings of the present invention contemplates the filling of the rectangular carton or box with the desired product, after which a thermoplastic cover is applied to certain portions of the upper ends of the side and end walls, as will be specifically described hereinafter.

As shown in Figure 1, the upper ends of the side walls 2 are horizontally scored and the portions thereabove bent to form relatively short flanges or flaps 2*a* which extend outwardly at an angle of at least approximately ninety degrees, and preferably more than one hundred and twenty degrees. In some instances, it may be preferable to extend this angle to close to one hundred and eighty degrees.

The distance from which the foreshortened flaps 2*a* protrude from the score line may be quite short, and only sufficient to permit the said flaps to be turned outwardly and downwardly to the degree described. The end walls 3 are provided with an inwardly extending flap portion 3*b* having an integrally formed and reversely extending flap portion 3*c* of similar size and shape which is adapted to overlie it. According to this construction, there is provided an inwardly extending flap member 3*b*—3*c* of double thickness which extends inwardly at

approximately ninety degrees to the plane of the end wall 3 by which it is carried. With the side-wall flaps 2*a* disposed downwardly and outwardly as shown in Figure 2 and the end-wall flaps 3*b*—3*c* folded upon each other and occupying a substantially horizontal position as shown in Figure 3, a top closure 7 is placed in position, the same being formed of a suitable thermoplastic material. This thermoplastic cover sheet 7 is heated and pulled downwardly by pressure or vacuum onto the side-wall flaps 2*a* and end-wall flaps 3*b*—3*c* to the extent indicated in Figures 2 and 3; and this movement is continued until the thermoplastic cover sheet 7 and the side-wall flaps 2*a* are moved downwardly into parallelism with the adjacent surface of the side-wall. In this manner, the top of the side edges of the carton is completely closed and sealed; and there is provided an edge portion 7*a* which locks against the outer and downwardly extending edges of the flaps, including the extremities of the latter.

The end wall construction provides a flap 3*b*—3*c* having an upwardly directed spring action against which the sealing of the thermoplastic top cover 7 may take place. In this construction, the side edges of the said thermoplastic top cover overlie the space between the upper and outer edge of the flap portion 3*c* and the score line from which the flap 3*b* extends, the relationship being as shown at 7*c* in Figure 4.

While I have shown and described certain specific embodiments of the present invention, it will be readily understood that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the invention as defined in the appended claims.

I claim:

1. A container comprising a rectangular carton formed of sheet material and having a closed bottom, the upper ends of two of the side walls of said carton being scored along horizontal lines and bent outwardly to provide relatively short flanges which extend at angles of at least ninety degrees, the upper ends of the end walls of said carton being double-scored along horizontal lines and double-folded to provide relatively short flanges which extend inwardly of the carton at angles of approximately ninety degrees with respect to the end walls, and a thermoplastic cover overlying all of said flanges and being sealed to the outer edges thereof, said thermoplastic cover being also sealed to the end walls of said carton immediately adjacent their points of connection with the double-folded flanges.

2. A container comprising a rectangular carton formed of sheet material and having a closed bottom, the upper ends of two of the side walls of said carton being scored along horizontal lines and bent outwardly to provide relatively short flanges which extend at angles of at least one hundred and twenty degrees, the upper ends of the end walls of said carton being double-scored along horizontal lines and double-folded to provide relatively short flanges which extend inwardly of the carton at angles of approximately ninety degrees with respect to the end walls, and a thermoplastic cover for said container, said thermoplastic cover overlying all of said flanges and being sealed to the outer edges thereof, said thermoplastic cover being also sealed to the end walls of said carton immediately adjacent their points of connection with the double-folded flanges.

3. A container comprising a rectangular carton formed of sheet material and having a closed bottom, the upper ends of two of the opposing side walls of said carton being scored along horizontal lines and bent outwardly to provide relatively short flanges which extend at angles of at least ninety degrees, the upper ends of the other two side walls of said carton being double-scored along

horizontal lines and double-folded to provide relatively short flanges which extend inwardly of the carton at angles of approximately ninety degrees with respect to said first-named side walls, and a thermoplastic cover overlying all of said flanges and being sealed to the outer edges thereof, said thermoplastic cover being also sealed to said first-named side walls immediately adjacent their points of connection with said double-folded flanges.

4. A container comprising a rectangular carton formed of sheet material and having a closed bottom, the upper ends of two of the opposing side walls of said carton being scored along horizontal lines and bent outwardly to provide relatively short flanges which extend at angles of at least one hundred and twenty degrees, the upper ends of the other two side walls of said carton being double-scored along horizontal lines and double-folded

to provide relatively short flanges which extend inwardly of the carton at angles of approximately ninety degrees with respect to said first-named side walls, and a thermoplastic cover for said container, said thermoplastic cover overlying all of said flanges and being sealed to the outer edges thereof, said thermoplastic cover being also sealed to said first-named side walls immediately adjacent their points of connection with said double-folded flanges.

References Cited in the file of this patent

UNITED STATES PATENTS

1,815,565	Hill et al.	July 21, 1931
2,041,537	Frost	May 19, 1936
2,740,444	Martinelli	Apr. 3, 1956
2,758,775	Moore	Aug. 14, 1956