

April 19, 1960

R. GUYER

2,933,228

CONTAINER

Filed March 28, 1955

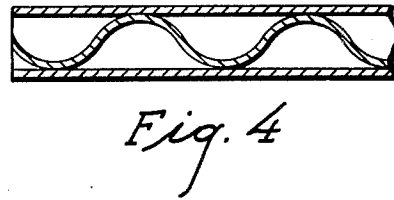
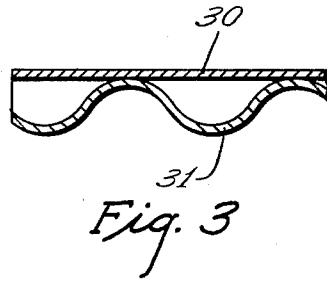
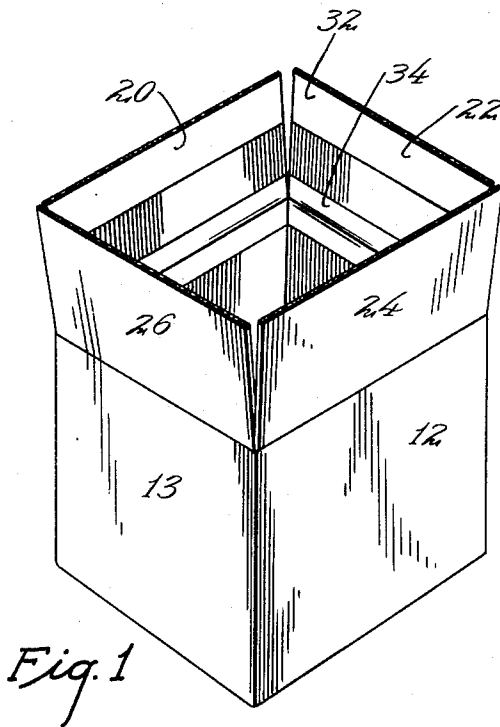


Fig. 1

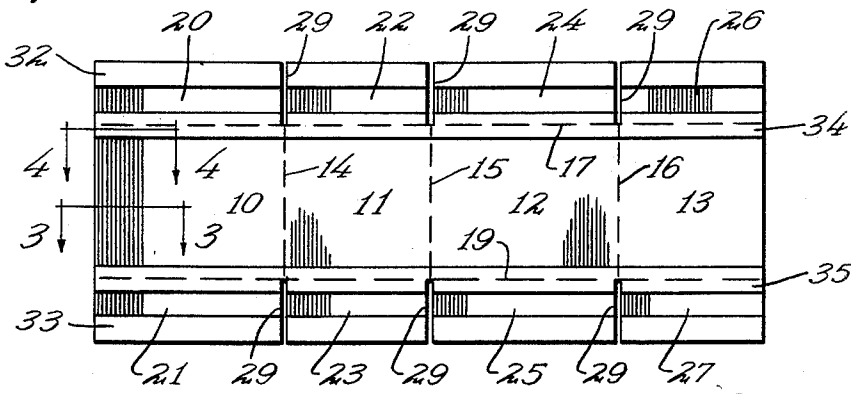


Fig. 2

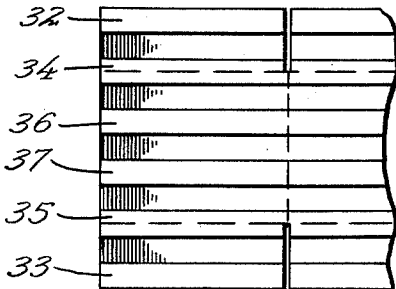


Fig. 5 Reynolds Guyer

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1

2,933,228

CONTAINER

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1 Claim. (Cl. 229—14)

This invention relates to an improvement in containers and deals particularly with a low cost container formed of corrugated paper board.

In the formation of corrugated board it is usual practice to combine a first liner sheet with a corrugated medium and next to combine the first two sheets with a second liner sheet to enclose the corrugated medium. As a result, three sheets of paper board are required, the intermediate sheet of which is of substantially greater length due to the corrugations or flutes therein. While board of this type is very widely used, in some instances the containers formed in this manner are somewhat more costly than might be required. For example, considerable expense may be saved if the material forming one of the liners was reduced in area.

A feature of the present invention lies in the formation of a container including an outer lining sheet, a corrugated medium adhered thereto, and a series of strips of paper secured to the corrugated medium and preferably forming the inner surface of the container. The strips of paper board cover spaced areas of the flutes or corrugations and does materially reduce the area of the inner liner. Containers of this type are suitable for certain purposes where strength and rigidity is not an essential feature.

A feature of the present invention lies in the formation of a container blank having an outer liner, a corrugated sheet adhered to a surface thereof and a pair of paper board strips secured to the corrugations at points spaced apart so that the strips will lie at the score lines forming the upper and lower edges of the container. In other words, the centers of the attached strips preferably are spaced apart a distance equal to the height of the container so that the board is reinforced at the crease lines.

A further feature of the present invention lies in the provision of a container blank having an outer liner, a corrugated sheet attached thereto, and a reinforcing strip attached along the marginal edges of the blank transversely of the flutes. These reinforcing strips form marginal surfaces which may be readily adhered to maintain the container in closed condition.

A further feature of the present invention lies in the provision of a container which may have one or more reinforcing strips at spaced intervals throughout the height of the container, the container's height being considered to extend transversely of the flutes of the corrugated sheet. As a result, the required strength is provided while the cost of one of the liners may be materially reduced.

A further feature of the present invention lies in the fact that the flutes of the corrugated sheet, when forming the inner surface of the container, help to cushion the container contents. Thus, a container of the type in question may be used, if desired, as interior packing for fragile articles if the container is placed within a container of conventional type.

These and other objects and novel features of my in-

2

vention will be more clearly and fully set forth in the following specification and claim.

In the drawings forming a part of the specification:

Figure 1 is a perspective view of a container with the top thereof open to show a portion of the interior construction.

Figure 2 is a diagrammatic view of the blank of which the carton is formed.

Figure 3 is a sectional view through a portion of the blank, the section being indicated by the line 3—3 of Figure 2.

Figure 4 is another sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a diagrammatic view of a modified form of container blank.

The container shape may, of course, be varied between wide limits, that illustrated being a common size. The container blank is shown as including four wall panels indicated by the numerals 10, 11, 12 and 13, these walls being connected by parallel fold lines 14, 15 and 16. The panels are connected along parallel fold lines 17 and 19 to closing flaps. The panel 10 is connected to closing flaps 20 and 21, the panel 11 is connected to closing flaps 22 and 23, the panel 12 is connected to closing flaps 24 and 25, while panel 13 is connected to closing flaps 26 and 27. These closing flaps are separated by slots 29 in the usual manner.

As is indicated in Figure 3, the sheet is formed in the usual manner by attaching a liner sheet 30 to a corrugated sheet 31, adhesive being applied to the surfaces of the corrugations so as to hold them securely to the flat liner 30. However, in place of attaching a wide liner similar to the liner 30 to the opposite sides of the corrugations, relatively narrow strips of liner stock are attached thereto. In the particular arrangement illustrated in Figure 2 of the drawings, four such strips are attached to the blank, two of these strips 32 and 33 extending along the margins of the blank while two additional strips 34 and 35 are attached in spaced relation to overlie the corrugated medium at the locations of the fold lines 17 and 19. Preferably, the fold lines 17 and 19 extend through the center portions of the strips 34 and 35.

As the corrugated board is usually sufficiently wide in a direction longitudinally of the flutes to form two or more containers in side by side relation, the strip such as 32 extending along one edge of the container may be of double width to form the strip 33 of the next adjoining blank. The board is eventually slitted to separate the two blanks and then cut off at proper length to form the other container dimension. In formation, the creases 17 and 19 are usually inserted at the end of the corrugation so that blanks of the proper size are formed. The blanks are then fed transversely through a printer and slotter which print the outer surface with the necessary indicia and crease and slot the blank in a direction parallel to the flutes of the corrugated medium.

When the container is formed, the end panels such as 10 and 13 are taped or otherwise connected to form a tubular body. The closing flap at each end of the container may then be folded in the usual manner to close the container ends. For example, the flaps 21 and 25 may be folded into a common plane and the flaps 23 and 27 folded to overlie the first folded flaps and are usually adhered thereto. The upper container end is folded in a similar manner.

It will be noted that the areas of the upper and lower fold lines are covered by the strips 34 and 35 so that these points are reinforced. The strips 32 and 33 provide a smooth undersurface for the last closed flaps at each container end and may be adhered in surface contact with the outer surface of the first folded flaps.

3

In Figure 5 of the drawings a structure is described which is identical with that previously described with the exception of the fact that two additional strips 36 and 37 are applied in spaced relation between the strips 34 and 35. As a result a stronger container is formed where such is required.

In accordance with the patent statutes, I have described the principles of construction and operation of my container, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claim without departing from the spirit of my invention.

I claim:

A container blank including a body of paperboard including a liner sheet, a corrugated sheet adhered to one surface thereof, and a series of parallel liner strips adhered to the corrugated sheet on the side thereof opposite that attached to the liner sheet, said corrugated sheet being exposed between said strips, spaced lines of fold

4

intersecting the flutes of the corrugated sheet parallel to the side edges thereof, two of said strips extending along said two side edges and intermediate strips overlying said corrugated sheet adjacent said lines of fold, the intermediate strips extending on both sides of said lines of fold, and additional fold lines parallel to the flutes of said corrugated sheet dividing said body into wall panels, and slots aligned with said last named fold lines between said first mentioned fold lines and said side edges.

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