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B. J. SCHAUS ETAL

3,136,474

CONTAINER

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Fig. 1.

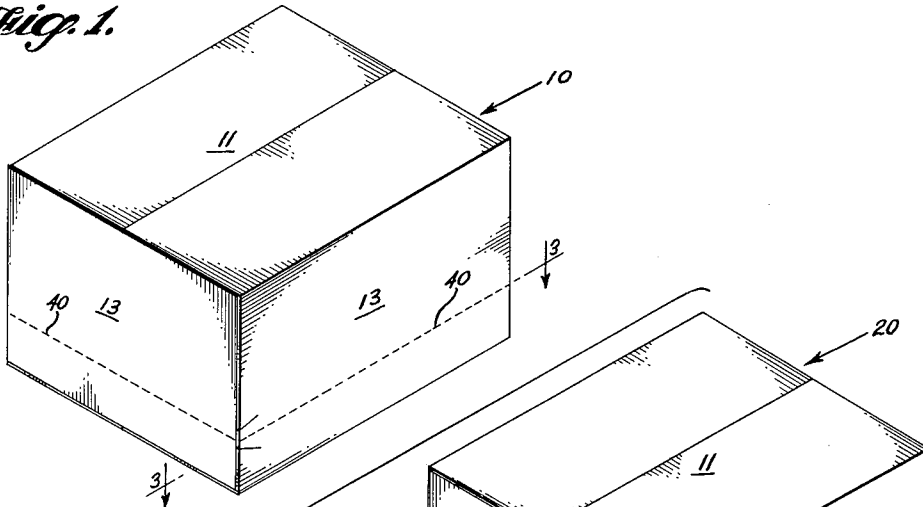


Fig. 2.

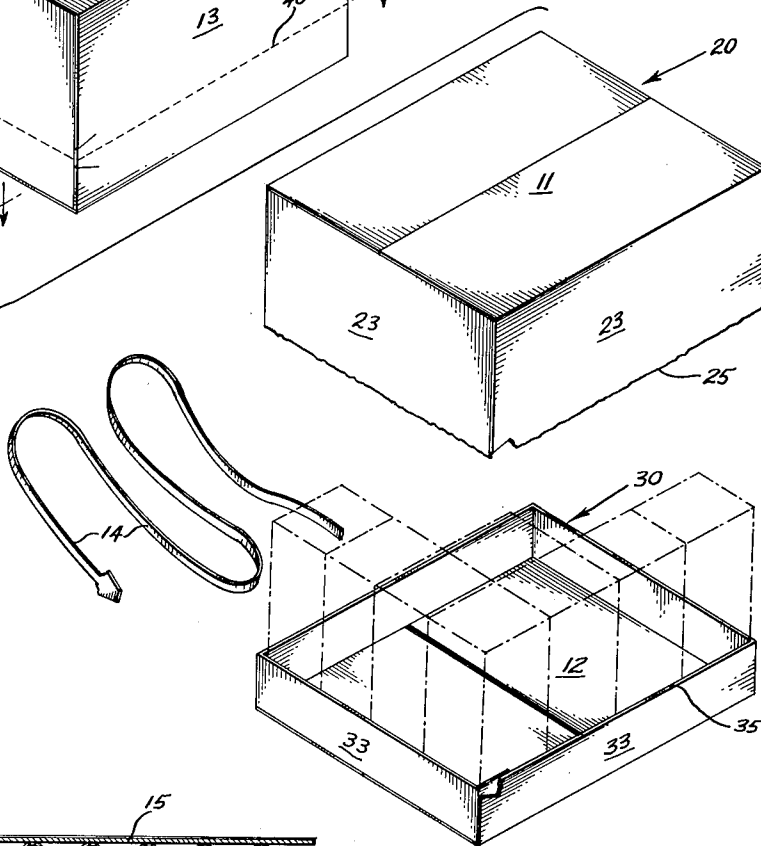


Fig. 3.

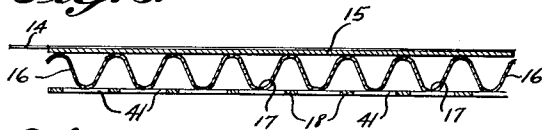
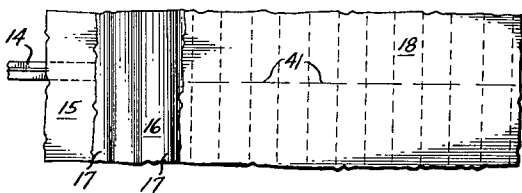


Fig. 4.



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3,136,474

CONTAINER

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 2 Claims. (Cl. 229—51)

This invention relates to a shipping container which may also be used as a stacking and display tray for the articles contained within it, and a method of making the container.

It has become common practice in the merchandising of fast-turnover consumer items, such as cans or cartons of food, to use the lower portion of the shipping container in which the items are shipped as a tray for stacking and displaying the articles. Thus, the articles cost less because they are handled less during their placement on the store shelves. The articles are more easily noticed because the tray identifies the articles and separates them from adjacent items. To form the tray, the side walls of the shipping container may be cut with a knife and the container divided into upper and lower sections, the lower section forming the tray. Quite often, this may result in damage to paperboard cartons within the container.

Another method of forming the tray is to divide the shipping container into upper and lower sections by use of a tear strip of some type in the side wall of the container. This method often removes portions of the side wall of the tray and reduces the effectiveness of the tray.

It is therefore an object of this invention to provide a shipping container which may be formed into one or more display trays having intact side walls. It is a further object of this invention to provide a container having aligned alternating scarification and slits on the outer corrugated facing adjacent the lower edge of a tear strip on the inner periphery of the corrugated medium so that the wall will separate along a predetermined line.

It is also an object of this invention to provide a method of forming a line of alternating scarifications and slits in a liner or facing of a corrugated board.

These and other objects of this invention will become readily apparent upon a reading of the following specification in conjunction with the attached drawings.

FIGURE 1 is an isometric view of the container prior to being opened.

FIGURE 2 is an isometric exploded view of the container showing the separation of the sections of the container.

FIGURE 3 is a cross-sectional view along line 3—3 of FIGURE 1.

FIGURE 4 is a front plan view of a section of the side wall of the container.

Corrugated shipping container 10 has a top wall 11, a bottom wall 12, and side walls 13, and may be divided into an upper section 20 and a lower, or tray, section 30 by a tear strip 14 of standard design formed on the inner liner, or facing, 15 of the corrugated side wall 13. Normally the edges 25 and 35 formed by this operation, which divides side walls 13 into upper panels 23 and lower panels 33, have a ragged appearance since the outer liner, or facing, 18 and, consequently, the corrugated medium 16 do not separate precisely along the line defined by tear strip 14. In many instances portions of the

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panels 33 and 23 are torn off so that the display material on the tray is removed and the effectiveness of the tray is reduced.

These problems may be prevented, however, by use of the present container. In this container, the outer liner 18 is scarified and slit along a line 40 adjacent the tray edge of tear strip 14. The slits 41 of line 40 extend through outer liner 18 only and do not extend into the corrugated medium 16 so that the strength of the corrugated board is not impaired. When the container is to be formed into a tray, the tear strip 14 separates outer liner 18, and consequently side wall 13, along line 40 so that the side panels 33 of the tray 30 will remain intact.

Scarified and slit line 40 may be formed either in the manufacturing operation or in the container blank die-cutting operation. In both of these methods, which utilize the resiliency of the corrugated medium 16 to form the alternating slits and scarifications in the liner, the line 40 is formed transverse to the direction of the corrugations. As may be seen in FIGURES 3 and 4, the slits are formed in the liner 18 at 17, the points of attachment of the corrugated medium 16 to the liner 18, and the scarifications are formed between the slits 41 and between the points of attachment 17.

The line 40 may be formed during the corrugated board manufacturing operation by placing a knife under the board in a position in which it will penetrate the liner only. As the corrugated board passes over the knife the corrugated medium 16 will force the liner 18 downwardly against the upward force of the knife at the points of attachment 17 so that the liner 18 will be slit by the knife. Between points 17 there is no downward force and the liner 18 is forced upwardly by the knife and is scarified rather than slit.

The same slitting and scarifying action occurs if the slitting and scarifying operation is a part of the carton blank die-cutting operation. Again, a knife is positioned so that it will penetrate the liner 18 only. However, the knife is now a part of the carton blank cutting die and line 40 is now formed during the forming of the container blank.

The term "scarify" defines the operation of partially incising the liner so that the fibres on one face of the liner are cut and the fibres on the other face of the liner remain intact, and may be considered as an operation intermediate "scoring," the indenting of the liner, and "slitting," the complete incising of the liner. The slitting, scarifying or scoring of the liner will depend in part on the physical properties of the liner and the distance between support points 17. Therefore, the "scarification line" between slits 41 may be partially scarified and partially scored, and the term "scarify" is intended to include either or both conditions.

While specific details of preferred embodiments and preferred methods have been set forth above, it will be apparent that many changes and modifications may be made therein without departing from the spirit of the invention. Thus, it is apparent that a pair of tear tabs may be placed within the side walls to form a pair of trays, and that the second slit and scarified line would be adjacent the upper edge of the second tear strip. Also it is apparent that with a pair of slit and scarified lines on the outer corrugated facing each adjacent on edge of the tear strip, an upper and lower section of the container retaining the

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side walls intact can be formed. It will therefore be understood that what has been described herein is intended to be illustrative only, and is not intended to limit the scope of the invention.

What is claimed is:

1. A container having top and bottom walls, and side walls extending between said top and bottom walls, said side walls comprising a corrugated medium faced with outer liners, said inner side wall periphery having a tear strip thereon for separating said container into upper and lower sections, one of which subsequently may be used as a tray, said side wall outer liner having a series of slits therein at regular spaced intervals extending through said outer liner only and a series of scarifications therein at regular spaced intervals between said slits, said slits and

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said scarifications being in alignment and adjacent the tray edge of said tear strip.

2. The container of claim 1 wherein said outer liner is slit at the junctures of said corrugating medium with said outer liner.

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