

May 7, 1963

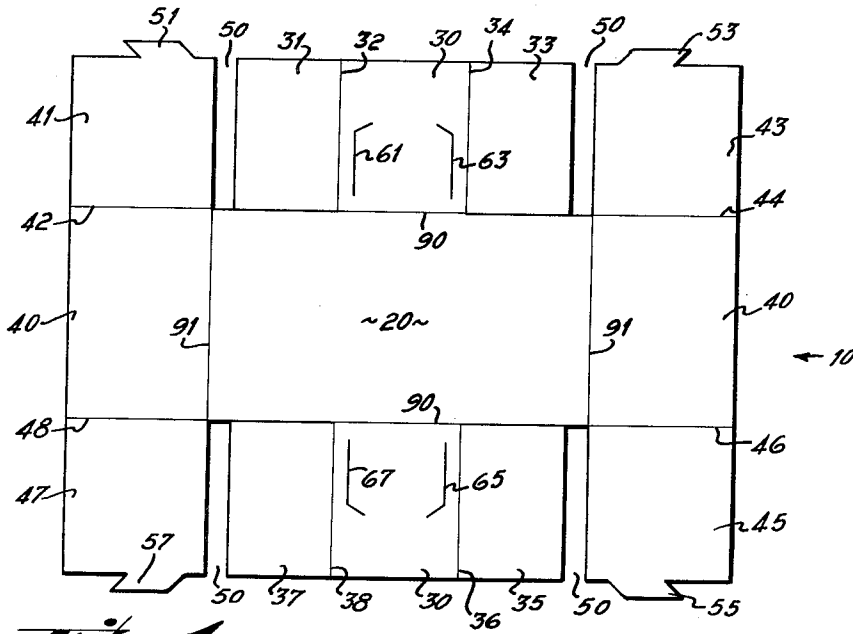
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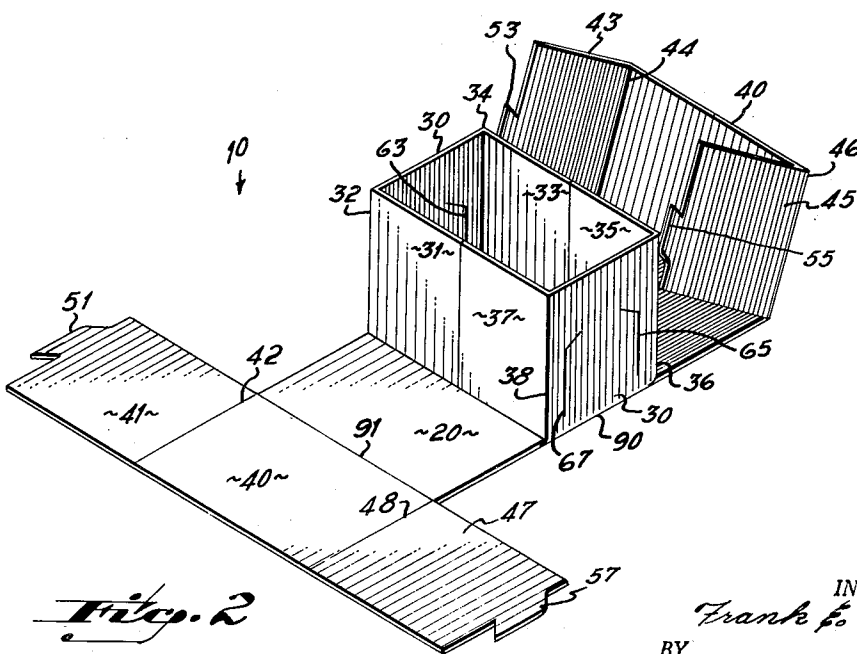
PARTITIONED CARTON AND BLANK FOR FORMING SAME

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2 Sheets-Sheet 1



*Fig. 1*



*Fig. 2*

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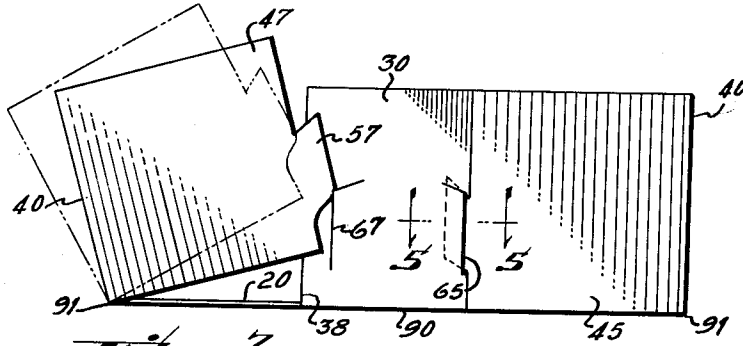
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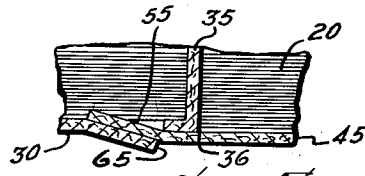
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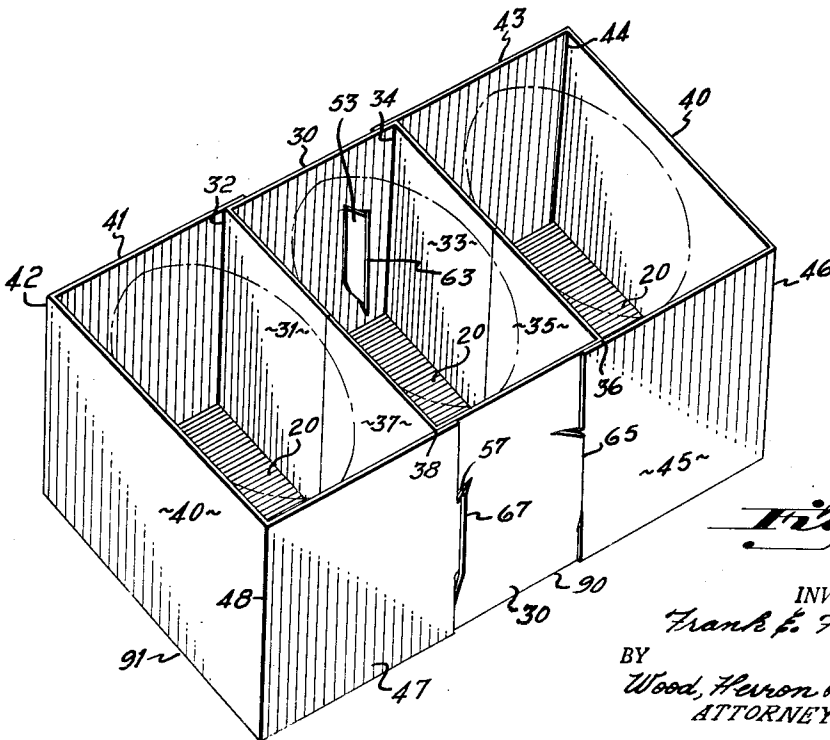
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*Fig. 3*



*Fig. 5*



*Fig. 4*

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**PARTITIONED CARTON AND BLANK FOR FORMING SAME**

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5 Claims. (Cl. 229-27)

This invention relates to the manufacture of containers or cartons of the type formed from single blanks by folding end and side walls into erect, interlocked engagement. More particularly, the invention relates to such containers in which one or more partitions, integral with the blank, are formed to divide the container into compartments.

Partitioned containers in the past have required either non-integral inserts or the use of integral spacer panels which are doubled back along a wall of the container to position the partitions in their desired locations. The former type of construction is costly and requires the forming of separate and distinct pieces in order to make a single partitioned container. The latter type of construction involves not only the extra step of folding the spacer panel itself, but also the disadvantage of the waste of material of which the spacer panel is formed.

It is an object of this invention to provide a partitioned container and display carton formed from a single blank and having a plurality of integral cross partition panels which are positioned directly, without the need for spacer panels, to divide the carton into a plurality of compartments. It is a further object of this invention to provide an integral partitioned carton formed from a single blank which does not require the use of an insert.

Another object of the invention is to provide a partitioned container and display carton for foods such as bakery goods, which require both protection against breakage and chippage as well as visibility for display.

Another object of the invention is to provide for the formation of a partitioned three compartment container from a substantially rectangular blank thereby minimizing waste material in cutting the blank.

Still another objective of the invention is to provide for the formation of a partitioned container from a one piece blank requiring a minimum number of folds, all of which are in the same direction with respect to the plane of the blank.

For the attainment of these and such other objects as may appear or be pointed out, I have shown an embodiment of my invention in the accompanying drawings wherein:

FIG. 1 is a plan view of the blank used in forming the container;

FIG. 2 is a perspective view showing the container partially formed;

FIG. 3 is a side elevational view showing a further step in the formation of the carton;

FIG. 4 is a perspective view showing the container completely formed; and

FIG. 5 is an enlarged fragmentary cross-sectional view taken along lines 5-5 of FIG. 3 showing a preferred type of locking means used in the container.

FIG. 1 shows a blank 10 used in forming the subject of the invention. The blank is preferably made of cardboard, fiberboard, or any other similar foldable material. The blank 10 is generally rectangular in shape and is of such size as to conform with the size and character of the particular articles desired to be packed.

In the preferred embodiment of the invention, the blank 10 comprises a generally rectangular bottom panel 20, a pair of opposing side walls 30-30 and a pair of opposing end walls 40-40. Side walls 30-30 and end

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walls 40-40 are connected to bottom panel 20 at score lines 90 and 91 respectively.

Opposite ends of side walls 30 are provided with partition panels 31, 33, 35 and 37 which are respectively connected to the side walls 30 at score lines 32, 34, 36 and 38.

Opposite ends of end walls 40 are provided with end flaps 41, 43, 45 and 47 which are connected to end walls 40 at score lines 42, 44, 46 and 48 respectively.

In forming the container, opposite side walls 30 are first folded into erect position and partition panels 31, 33, 35 and 37 are then folded inwardly to extend perpendicularly to side walls 30 as can be seen in FIGURE 2. In the preferred embodiment, the partition panels are constructed so that opposite panels barely meet when folded into a normal plane but it is to be appreciated that, if desired, these partitions may be made to overlap and may even be provided with means to become secured together so as to form an even more rigid structure. The length which the partition panels 31-33-35-37 extend into the container may be varied by varying the width of slots 50 which define the opposite outer ends of the partition panels from their adjacent end flaps.

In the second step in erecting the container, end flaps 41-43-45-47 are folded inwardly approximately 90° at the same time during which end panels 40 are folded upwardly and inwardly toward an erect position. As seen in FIGURES 2 and 3, end flaps 41-43-45-47 are provided with angular locking ears 51-53-55-57 which are adapted for engagement in locking slits 61-63-65-67 which are cut in side walls 30. This preferred type of engagement is shown in FIGURE 5.

In the assembled form indicated at FIGURE 4, it will be seen that partition panels 31-33-35-37 extend directly from opposite side walls 30 and transversely to rectangular bottom panel 20 to divide the container into three separate compartments. As seen in FIGURE 2, spaces are vacated along the sides of the container immediately adjacent opposite ends of side walls 30 by the inward folding of the partition panels. With reference to FIGURES 3 and 4, it may be seen that these vacated spaces are enclosed or covered by end flaps 41-43-45-47 which overlap the outside of side walls 30 and engage in the locking slits in the manner described above.

In use, the blanks would be shipped flat to the packager and there formed into partitioned containers in the manner described above. Articles would be placed in the three compartments of the container and the container closed by a suitable cover or by a transparent material such as cellophane.

When in the three compartments, the articles provide mutual support for the partitioned panels 31-33-35-37 in that with articles on each side of the partitioned panels, the fixed relationship of the panels is maintained.

As indicated above, however, each partitioned panel could be made slightly longer by utilizing the space indicated at 50 so that the panels would overlap at the center of the container. The overlapping portions could be glued or stapled together to add to the strength of the container. While adding to the strength of the container, the securing together of the panels 30 would add to the expense of the overall operation of forming the containers and is not necessary except in very unusual situations.

It should be observed that several economical features are embodied in the design. In the first instance, the one piece blank is substantially rectangular thus permitting the forming of the blanks with a minimum waste of material. It should also be observed that the invention requires a minimum number of folds for a three compartment container and that all folds are made in the same direction with respect to the plane of the one

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piece blank. Thus the blank is ideally suited for either rapid manual operation or for automatic folding machinery.

Preliminary to packaging the scored and cut blanks will be positioned in the hopper of a known folding machine. The machine will have cooperating male and female members which receive each blank and in one stroke, fold and lock the several panels together. The one stroke operation is made possible by the design which has the folds all in the same direction as indicated above.

I claim:

1. A blank for forming a container having integral cross-partitions, said blank having a central, generally rectangular bottom panel, a pair of end panels and a pair of side panels hingedly connected to side edges of said bottom panel and adapted to be folded into erect position with respect thereto said side panels being centrally located with respect to the longitudinal edges of said bottom panel and extending longitudinally a distance substantially less than the length of said longitudinal edges, end flaps hingedly connected to opposite ends of each of said end panels, said end flaps adapted to be folded 90° from said end panels into overlapping engagement with said side panels, means for fastening said end flaps to said side panels to lock said end and said side panels into erect position, partition panels hingedly connected to the opposite ends of each of said side panels and being adapted to be folded transversely to said bottom panel to divide said container into partitioned compartments.

2. A blank for forming a container with integral partitions, said blank having a central bottom panel, a pair of end panels and a pair of side panels hingedly connected to the side edges of said bottom panel and adapted to be folded into erect position with respect thereto said side panels being centrally located with respect to the longitudinal edges of said bottom panel and extending longitudinally a distance substantially less than the length of said longitudinal edges, said side panels having a pair of slits therein, end flaps connected to opposite ends of each of said end panels, locking hooks projecting from the ends of said end flaps, said flaps adapted to be folded 90° from said end panels with said locking hooks inserted in the slits of said side panels to secure said end flaps to said side panels, partition panels hingedly connected to the opposite ends of each of said side panels and being adapted to be folded transversely to said bottom panel in overlapping engagement to divide said container into partitioned compartments.

3. A blank for forming a container with integral partitions, said blank having a central, generally rectangular bottom panel, a pair of end panels and a pair of side panels hingedly connected to the edges of said bottom panel and adapted to be folded into erect position with respect thereto said side panels being centrally located with respect to the longitudinal edges of said bottom panel and extending longitudinally a distance substantially less than the length of said longitudinal edges, partition panels hingedly connected to the opposite ends of each of said side panels and being adapted to be folded

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inwardly across said bottom panel to form partitions extending transversely thereof, end flaps hingedly connected to opposite ends of each of said end panels, said end flaps adapted to be folded 90° from said panels into overlapping engagement with said side panels to cover the spaces vacated by said inwardly folded partition panels, means for securing said end flaps to said side panels at their overlapping portions.

4. A container formed from a unitary cut and scored foldable blank and comprising a substantially rectangular bottom panel, a pair of oppositely disposed end panels and a pair of oppositely disposed side panels said side panels being centrally located with respect to the longitudinal edges of said bottom panel and extending longitudinally a distance substantially less than the length of said longitudinal edges, each of said side and end panels being erect with relation to said bottom panel and being hingedly secured to a side edge thereof, end flaps being hingedly secured to opposite ends of each of said end panels, said end flaps adapted to be folded inwardly 90° from said end panels into overlapping engagement with said side panels, means securing said end flaps and side panels at their overlapping portions, partition panels hingedly secured to opposite ends of each of said side panels and adapted to be swung inwardly from said side panels transversely into said container to partition said container.

5. A blank for forming a container with integral partitions, said blank having a central bottom panel, scored lines defining a pair of end panels and a pair of side panels from the edges of said bottom panel, said end and side panels being adapted to be folded into erect position with respect to said bottom panel said side panels being centrally located with respect to the longitudinal edges of said bottom panel and extending longitudinally a distance substantially less than the length of said longitudinal edges, scored lines defining end flaps at opposite ends of each of said end panels, said end flaps adapted to be folded 90° from said end panels into overlapping engagement with said side panels, scored lines hingedly defining a partition panel at the opposite ends of each side panel, slots defining the outer ends of said partition panels from said end flaps, said partition panels being adapted to be folded transversely to said bottom panel to divide said container into partitioned compartments, said end flaps bridging the spaces along the sides of said container vacated by said inwardly folded partition panels, means interlocking said side panels with said overlapping end flaps.

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