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FIBERBOARD CONTAINER

Filed May 16, 1960

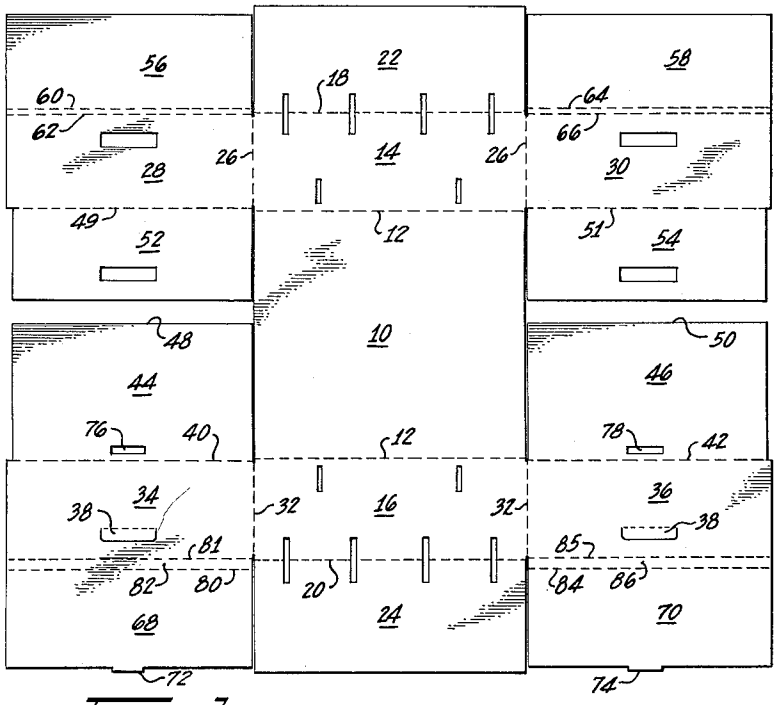


FIG. 1

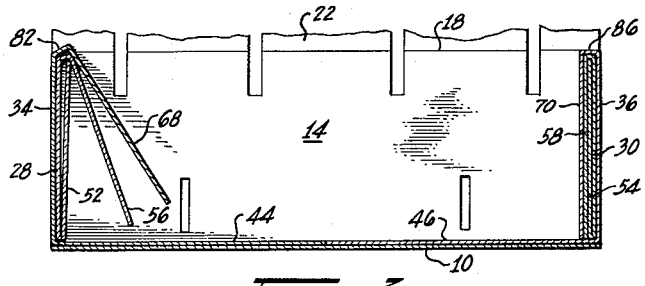


FIG. 3

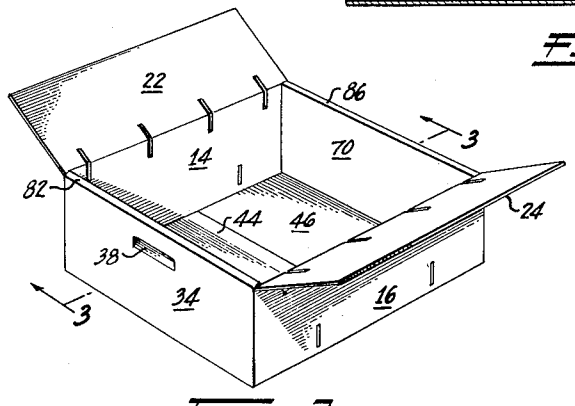


FIG. 2

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FIBERBOARD CONTAINER

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This invention relates to a fiberboard container formed of a single, rectangular blank and more particularly to a fiberboard container having a smooth bottom of double thickness and end walls formed of five thicknesses of fiberboard material, thereby according the structure unusual stacking strength.

It is an object of this invention to provide a fiberboard container suitable for carrying relatively heavy objects and which exhibits unusual stacking strength.

Other objects and advantages of this invention, if not specifically set forth, will become apparent during the course of the description which follows.

In the drawings:

FIGURE 1 is a plan view of the fiberboard blank of this invention.

FIGURE 2 is a perspective view of a container erected from the blank of FIGURE 1.

FIGURE 3 is a longitudinal section through the erected container taken on line 3—3 of FIGURE 2.

Generally, the carton of this invention is particularly designed for carrying foods and produce and is characterized by its smooth, double reinforced bottom and ends each having a total of five thicknesses of fiberboard. The container thus has extreme strength and rigidity, especially when stacked.

Referring to the drawings where like characters refer to like parts throughout, there is shown a single, rectangular blank where many of the score lines thereof which divide the various panels form continuous straight lines. This makes possible the formation of many of the score lines with rotating scoring equipment beneath which the blanks may be moved. The outer (lowermost) bottom 10 of the container has score lines 12 running along the longitudinal edges thereof providing hinges for the side panels 14 and 16. The lateral (shortest) edges of bottom 10 are cut free. The side panels 14 and 16 may have one or more ventilating holes therein. Score lines 18 and 20 run along the longitudinal edges of panels 14 and 16 respectively and articulated therealong are cover panels 22 and 24 (which may be folded inwardly to provide double thickness sides). Side panel 14 is provided with score lines 26 along its lateral edges and along which a pair of rectangular end panels 28 and 30 are hinged. Similarly, the opposite side wall 16 is provided with score lines 32 along its lateral edges and along which exterior end panels 34 and 36 are hinged. As shown, these exterior end panels may be provided with a tab 38 therein, shown cut on three sides and hinged on the fourth (alternatively, the rectangle shown can be cut entirely free) whereby to provide means for gripping the assembled carton with the fingertips.

Each of the exterior end panels 34 and 36 has hinged thereto along a longtiudinal edge, and more specifically along lines 40 and 42, respectively, a bottom reinforcing panel designated 44 and 46, respectively. When assembled, as shown in FIGURE 2, and as further shown in the sectional side elevation in FIGURE 3, the leading edges 48 and 50 of the aforementioned bottom reinforcing panels 44 and 46 abut one another while overlying the bottom 10, thus affording a smooth surface and a bottom of double thickness. End wall panels 28 and 30 each have hinged thereto along longitudinal edges represented by lines 49 and 51, respectively, additional reinforcing end wall panels 52 and 54 respectively. Additional reinforcing panel 56 is hingedly connected to the other longitudinal edge of panel 28 by means of spaced score lines 60 and 62 while the corresponding end reinforcing panel 58 is hingedly connected to the other longitudinal edge of end panel 30 by means of spaced score lines 64 and 66.

End panels 68 and 70 represent the innermost end walls of the assembled carton, and each is provided with a tongue designated 72 and 74, respectively, of a size and location to register with slot 76 or 78 of the bottom reinforcing panel 44 or 46. End wall 68 is hinged to supporting panel 34 along a longitudinal edge thereof and more particularly along spaced score lines 80 and 81 which together provide the narrow horizontal ledge 82 in the assembled carton. Similarly, interior end wall panel 70 is along a longitudinal edge of panel 36 and, more particularly, is hinged along spaced score lines 84 and 85 which together form the narrow ledge 86 in the assembled carton. The narrow (lateral) edges of panels 68 and 70 are both cut free and the other longitudinal edge of each panel is also free.

As shown in FIGURE 1, the preferred structure results in opposite sides which are mirror images of one another. This places the two tongues 72 and 74 along one edge of the rectangular blank and results in less fiberboard being consumed than if the tongues were on opposite sides of the blank.

A conveniently sized commercial embodiment of this carton results from a blank 48½" by 42". The preferred sizes of the individual panels may be determined from the drawing which represents the aforementioned sized blank drawn to scale.

In erecting the container into the form shown in FIGURE 2, end wall panel 36 is bent upwardly around hinged crease 32 while the bottom reinforcing panel 46 is bent at right angles to end wall panel 36 about crease 42. Simultaneously, side wall 16 is bent at right angles to exterior bottom panel 10 and the opposite end wall 34 is bent at right angles around crease 32 while interior bottom reinforcing panel 44 is bent upwardly about crease 40. Panels 52 and 54 are then pulled down tightly against end wall panels 28 and 30, respectively, and each of panels 28 and 30 is bent upwardly about crease lines 26 following which side panel 14 is bent upwardly at a right angle to bottom 10 about crease line 12. Panels 56 and 58 are forced tightly over panels 52 and 54, respectively, so as to form a reinforcement of triple thickness, and each triple thick unit is placed against the interior of end wall 34 or 36. The two panels 68 and 70 are thereafter swung inwardly and tongues 72 and 74 inserted in the slots 76 and 78. The cover panels 22 and 24 are folded into place after the carton has been filled with produce or the like.

This carton has been specifically designed to provide a container which represents a proper balance between the desiderata of maximum stacking strength, maximum loading capacity and minimum of uneven surfaces, particularly on the inside of the bottom. Uneven interior bottom surfaces will damage tomatoes, peaches and the like.

Obviously many modifications and variations may be made without departing from the spirit and scope of this invention, and therefore only such limitations should be imposed as are indicated in the appended claims.

I claim:

1. A rectangular fiberboard blank suitable for being folded into a container for produce and the like comprising: a first rectangular main bottom panel having free lateral edges; a side panel articulated along each longitudinal edge of said main bottom panel, each of said side panels having articulated thereto along one longitudinal edge thereof a second panel of a size substantially equivalent to that of the said side panel, each of said side

panels having articulated to each lateral edge thereof an end wall panel whereby four end wall panels are directly articulated to said side panels, two of said four end wall panels serving as exterior end wall panels when the said blank is assembled into a container, each of the said exterior end wall panels having articulated thereto along a first longitudinal edge a first reinforcing end wall panel of substantially equivalent size and shape, each of said first reinforcing end wall panels having free lateral edges and a free longitudinal edge, each of said two exterior end wall panels having articulated along a longitudinal edge thereof a bottom reinforcing panel, each of said other two of said four end wall panels having articulated along each longitudinal edge thereof a second and third reinforcing end wall panel of a size and shape substantially equivalent to that of the first reinforcing end wall panel.

2. A rectangular fiberboard blank suitable for being folded into a container for produce and the like comprising: a first rectangular main bottom panel having free lateral edges; a side panel articulated along each longitudinal edge of said main bottom panel, each of said side panels having articulated thereto along one longitudinal edge thereof a second panel of a size substantially equivalent to that of the said side panel, each of said side panels having articulated to each lateral edge thereof an end wall panel whereby four end wall panels are directly articulated to said side panels, two of said four end wall panels serving as exterior end wall panels when the said blank is assembled into a container, each of the said exterior end wall panels having articulated thereto along a first longitudinal edge a first reinforcing end wall panel of substantially equivalent size and shape, each of said first reinforcing end wall panels having free lateral edges and a free longitudinal edge, each of said two exterior end wall panels having articulated along a longitudinal edge thereof a bottom reinforcing panel, each of the said bottom reinforcing panels having a free leading edge and being of such a size that when the said blank is folded into a carton, the said bottom will be completely covered and the said leading edges of said bottom reinforcing panels will abut one another, each of said other two of said four end wall panels having articulated along each longitudinal edge thereof a second and third reinforcing end wall panel of a size and shape substantially equivalent to that of the first reinforcing end wall panel.

3. A generally rectangular, fiberboard blank suitable for being folded into a container for produce and the like comprising: a rectangular main bottom panel having free lateral edges; a side panel articulated along each longitudinal edge of said main bottom panel, each of said side panels having articulated thereto along one longitudinal edge thereof a second panel of a size substantially equivalent to that of the said side panels, each of said second panels serving as a top flap and together comprising the top for the said container, each of said side panels having articulated to each lateral edge thereof an end wall panel whereby four end wall panels are directly articulated to said side panels, two of said four end wall panels serving as exterior end wall panels when the said blank is assembled into a container, each of the said exterior end wall panels having articulated thereto along a first longitudinal edge a first reinforcing end wall panel of substantially equivalent size and shape, each of said first reinforcing end wall panels having free lateral edges and a free longitudinal edge, each of said two exterior end wall panels having articulated along a longitudinal edge thereof a bottom reinforcing panel, each of said other two of said four end wall panels having articulated along each longitudinal edge thereof a second and third reinforcing end wall panel of a size and shape substantially equivalent to that of the first reinforcing end wall panel.

4. A generally rectangular, fiberboard blank suitable for being folded into a container for produce and the like comprising: a rectangular main bottom panel having free lateral edges; a side panel articulated along each longitudinal edge of said main bottom panel, each of said side panels having articulated thereto along one longitudinal edge thereof a second panel of a size substantially equivalent to that of the said side panels, each of said second panels serving as a top flap and together comprising the top for the said container, each of the said side panels having articulated to each lateral edge thereof an end wall panel whereby four end wall panels are directly articulated to said side panels, two of said four end wall panels serving as exterior end wall panels when the said blank is assembled into a container, each of the said exterior end wall panels having articulated thereto along a first longitudinal edge a first reinforcing end wall panel of substantially equivalent size and shape, each of said first reinforcing end wall panels having free lateral edges and a free longitudinal edge, each of said two exterior end wall panels having articulated along a longitudinal edge thereof a bottom reinforcing panel, each of the said bottom reinforcing panels having a free leading edge and being of such a size that when the said blank is folded into a carton, the said bottom will be completely covered and the said leading edges of said bottom reinforcing panels will abut one another, each of said other two of said four end wall panels having articulated along each longitudinal edge thereof a second and third reinforcing end wall panel of a size and shape substantially equivalent to that of the first reinforcing end wall panel.

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