

Aug. 13, 1957

D. B. RADKE
CAN CARTONS

2,802,615

Filed Jan. 2, 1953

2 Sheets-Sheet 1

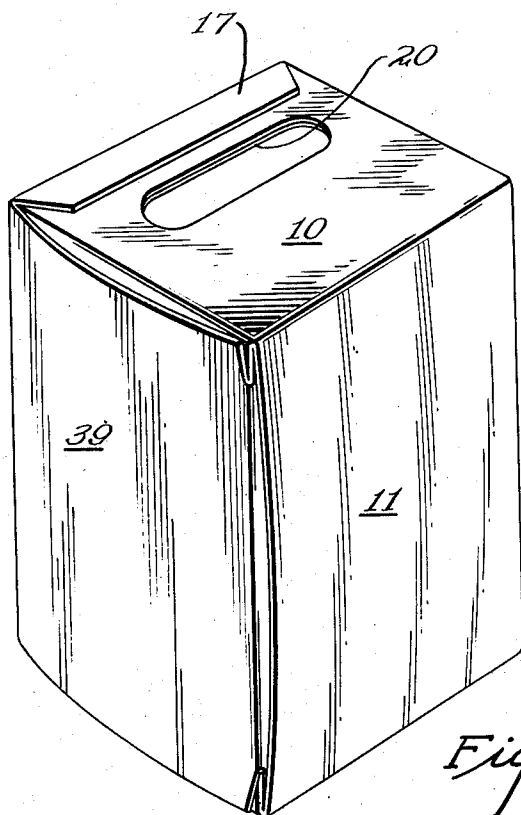


Fig. 1

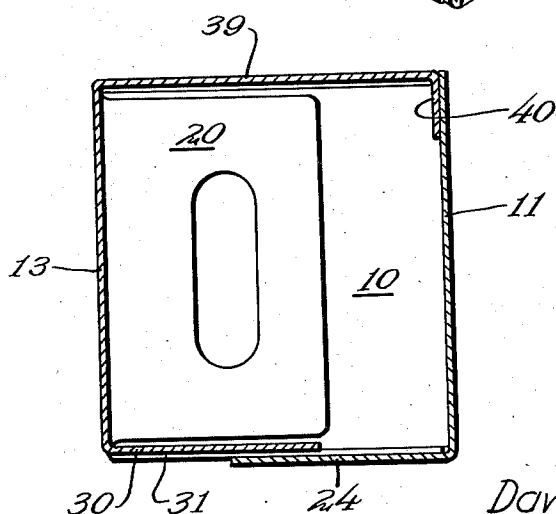


Fig. 2

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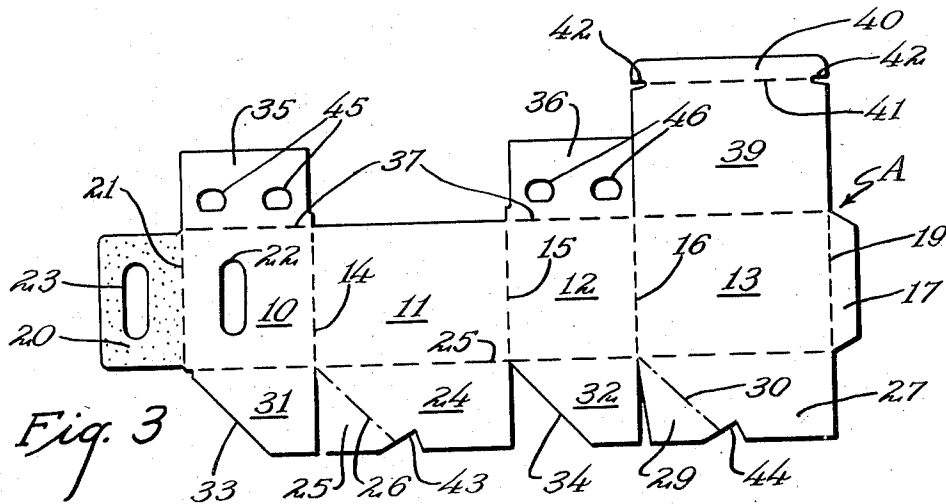
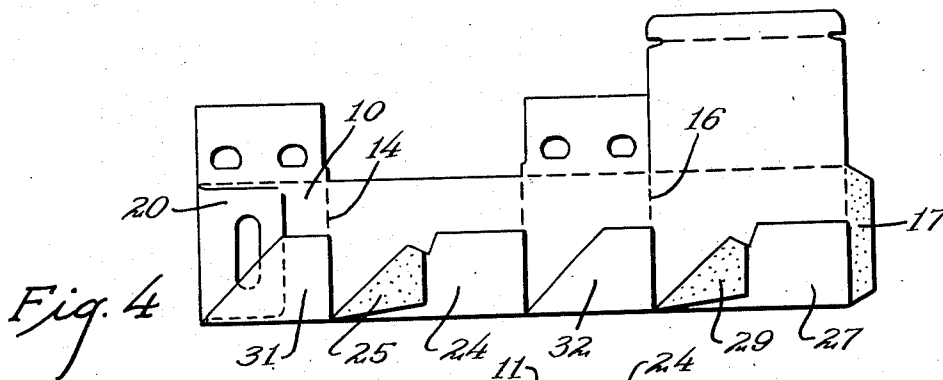
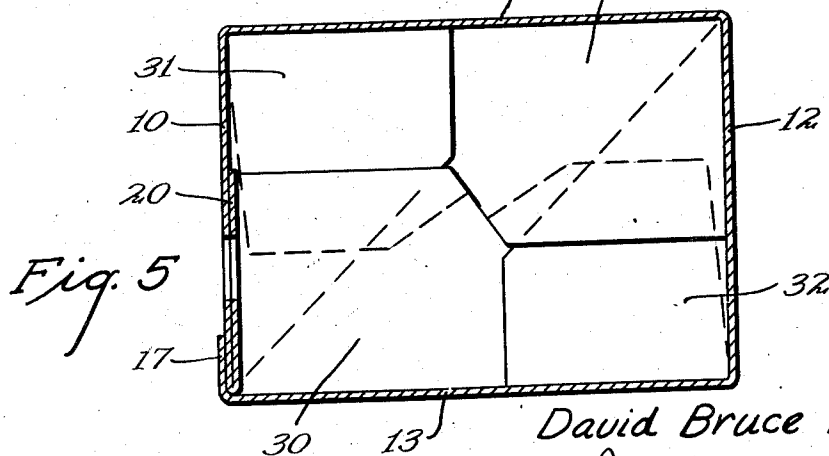
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CAN CARTONS

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1 Claim. (Cl. 229—52)

This invention relates to an improvement in can cartons and deals particularly with a carton particularly useful in carrying canned goods and the like.

Various types of cartons have been produced for carrying canned goods. Many such cartons have been designed for carrying six cans of beer or the like, and these cartons are normally provided with some type of handle by means of which they may be carried. The present invention deals with a carton of this general type.

An object of the present invention lies in the provision of a carton which can be easily and quickly closed and which may be easily carried. The carton is so arranged that when being carried the cans are in two rows of three superimposed cans the top of the carton is provided with a reinforced hand hole through which the hand may be inserted for carrying the package.

A feature of the present invention lies in the provision of a particular means of reinforcing the carton. This is accomplished by providing an extra flap at one end of the blank which is designed to underlie the wall to which it is attached to provide a reinforcement therefor.

A further feature of the present invention resides in the provision of a carton having a closure which is normally the bottom of the carton during the filling operation and having a readily closable top. One end wall of the structure thus described is provided with a reinforced hand hole therein and this end of the carton is normally turned uppermost when the carton is carried. The cans contained are so arranged that the strain on the carton due to the weight of the contents is against the foldably connected tubularly arranged walls rather than against the foldable bottom and closable top. In other words, the top and bottom closures form the ends of the carton when carried, there being substantially less end strain on the carton than strain on the other walls thereof.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claim.

In the drawings forming a part of my specification:

Figure 1 is a perspective view of the form of carton.

Figure 2 is a sectional view through the carton looking toward the handle end thereof.

Figure 3 is a diagrammatic view of the blank of which the carton is formed.

Figure 4 is a view similar to Figure 3 showing the carton in partially folded condition.

Figure 5 is a sectional view through the formed carton looking toward the bottom thereof.

The carton A includes a series of rectangularly arranged walls which normally form the side walls of the carton when it is not being carried. These walls include an end wall 10, a side wall 11, an end wall 12, and a side wall 13 in rectangularly arranged relation, and connected by parallel fold lines 14, 15 and 16. An end flap 17 is foldably connected to a side wall such as 13 along a fold line 19. This flap 17 is designed to be ad-

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hered to the outer surface of the end wall 10 to produce a tubular carton.

A reinforcing flap 20 is hingedly connected to the end wall panel 10 along a fold line 21. A hand hole 22 is provided in the end wall 10 and a similar registering hand hole 23 is provided in the reinforcing panel 20.

A bottom panel 24 is foldably connected to the lower edge of the side wall 11 along a fold line 25. This bottom panel 24 is provided with a triangular anchoring flap 25 connected thereto along a diagonal fold line 26 emanating from the juncture between the fold lines 14 and 25. The side wall panel 13 is also provided with a bottom flap 27 provided with a triangular portion 29 connected thereto along a diagonal fold line 30. Bottom flaps 31 and 32 are foldably connected to the lower edge of the end wall panels 10 and 12 along the fold line 25, each of these flaps being provided with diagonally cut edges 33 and 34 respectively.

The end panels 10 and 12 are provided with top closing flaps 35 and 36 connected along a fold line 37. The side wall 13 is connected along the fold line 37 to a top panel 39 provided with a tuck flap 40. The tuck flap 40 is connected along the fold line 41 and is provided with notches 42 at the juncture between the tuck flap and the top to lock the cover flap 39 in closed position.

The carton is glued as illustrated in Figure 4 of the drawings. The reinforcing flap 20 is folded against the panel 10 and adhered thereto. The bottom flaps 24, 27, 31 and 32 are folded upwardly to overlie the walls to which they are hinged. During this action the triangular flaps 25 and 29 are folded along their respective fold lines 26 and 30 to overlie the remainder of the bottom flaps to which they are hinged. Adhesive is applied to these triangular flaps 25 and 29 so that as the carton is folded along the fold lines 14 and 16, the bottom flap 31 is adhered to the triangular flap 25 and the bottom flap 32 is adhered to the triangular flap 29. The glue flap 17 also overlies the end wall 10 and is adhered thereto.

When the carton is unfolded the bottom automatically folds down in the known manner, the two bottom panels 24 and 27 unlocking in the notches 43 and 44. This provides a carton with a closed bottom and an open top which may be readily filled with the cans. The top flaps 35 and 36 are next folded down into the same plane and the cover flap 39 is folded over the flaps 35 and 36 and the tuck flap 40 inserted inwardly of the side wall 13.

When the carton is to be carried, it is turned so that the end wall 10 is uppermost. As the cans are upright in the normal position of the carton, their axes will be horizontal when the end panel is turned uppermost. As the axes of the cans are parallel with the fold lines 14, 15, 16 and 19, the strain upon the carton during the carrying operation is virtually all upon the side and end walls of the carton which then becomes the side, top and bottom walls. The bottom of the carton and the top of the carton are in vertical parallel relation and are capable of resisting any axial movement of the cans relative to one another.

The flap 35 is provided with apertures 45 and the flap 36 is provided with similar apertures 46. These apertures are designed to accommodate the capped upper ends of cans with frusto conical tops. These apertures assist in holding the cans in place when the carton is filled.

It will be noted that the portion of the top panel bearing the hand hole is reinforced by the flap 20 and also by the glue flap 17. Thus one edge of the uppermost panel in carrying position is comprised of three thicknesses of paperboard and all of the area surrounding the hand hole is formed of at least two thicknesses. Thus the carton may be formed of relatively light paperboard without danger of the top tearing when the carton is carried,

In accordance with the patent statutes, I have described the principles of construction and operation of my can carton, 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 carton including in series a plurality of connected panels including in sequence, a glue panel, a first side wall panel, a bottom panel, a second side wall panel, a top panel, and a reinforcing panel, all of said panels being connected by parallel fold lines, said reinforcing panel folded inwardly along its fold line into surface contact with said top panel and adhesively connected thereto, said glue panel being folded over and secured to the top panel with the folded edge of the top panel and reinforcing panel in abutting relation to the first named side wall panel, said double thickness top having a hand hole

therethrough and cooperable closing flaps on at least certain of said panels and folded into substantially right angular relation to said panels, and means securing said flaps in panel closing condition.

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