Oct. 14, 1952 H. W. DARR 2,613,867

CARTON

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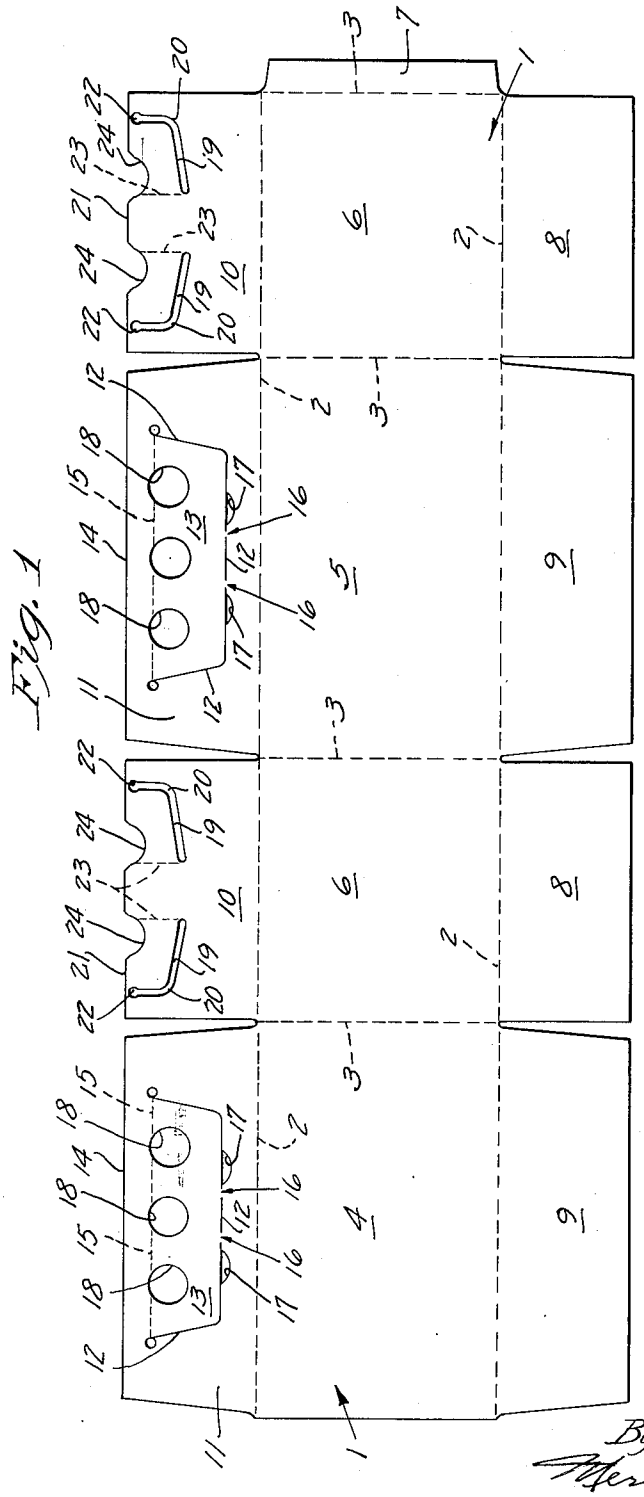


Fig. 1

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Fig. 2

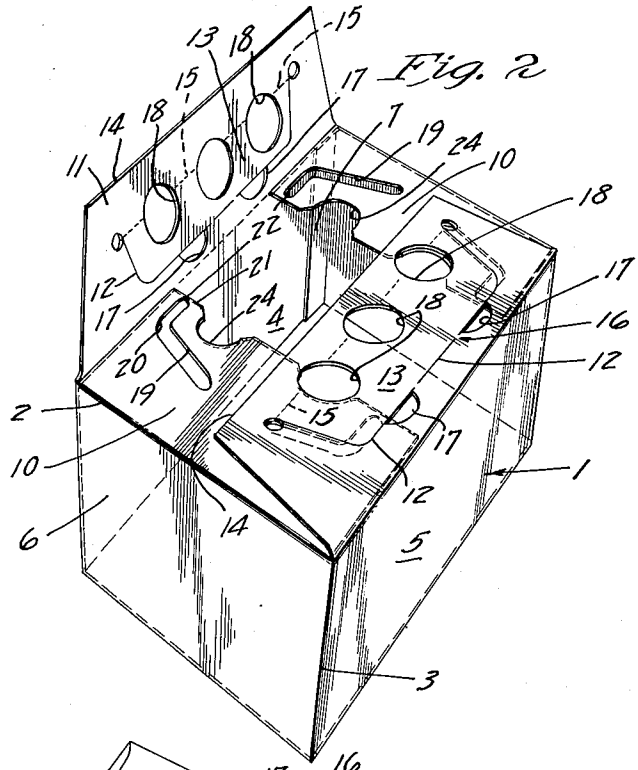
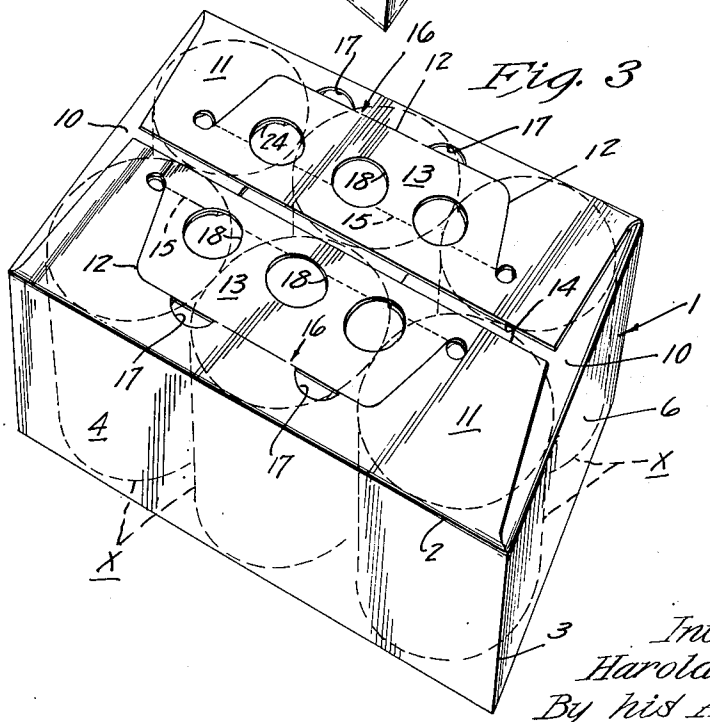


Fig. 3



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Fig. 4

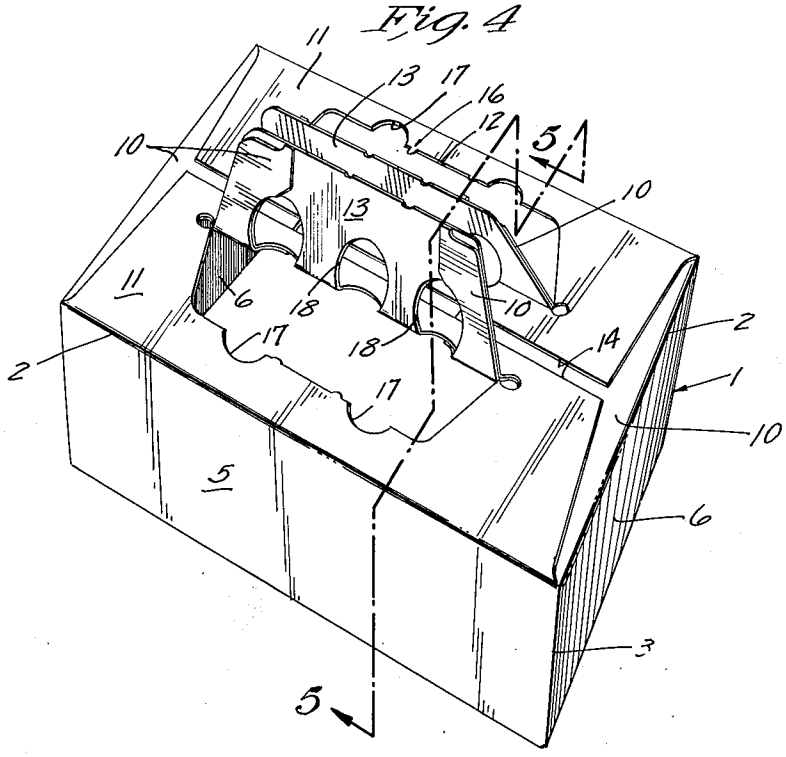
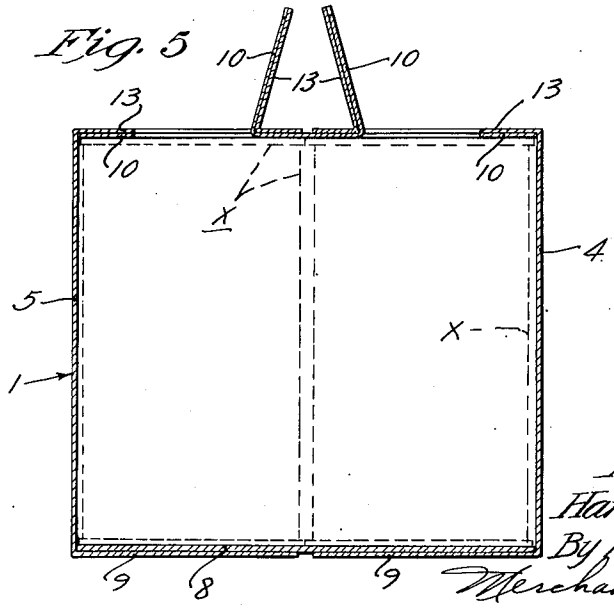


Fig. 5



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UNITED STATES PATENT OFFICE

2,613,867

CARTON

Harold W. Darr, Minneapolis, Minn., assignor of twenty-seven and one-half per cent to M. Josephine Darr, twenty-two and one-half per cent to Howard F. Woo, and twenty-two and one-half per cent to Lolita Y. Woo, all of Minneapolis, Minn.

Application August 3, 1949, Serial No. 108,274

2 Claims. (Cl. 229—37)

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My invention relates to folding cartons formed from cardboard or like sheet material and has for its primary object the provision of novel handle means therefor.

A highly important object of my invention is the provision of a novel handle means which may be formed in the blank from which the carton is formed without the necessity of using any extra material.

Another highly important object of my invention is the provision of a novel handle means which makes possible the use of relatively light-weight and inexpensive cardboard or other sheet material.

A still further object of my invention is the provision of novel handle means for folding cartons, which lie within the plane of the carton top when not in use, but which may readily be opened to operative position with a minimum of time and effort.

The above and still further important objects and advantages of my invention will become apparent from the following detailed specification, appended claims, and attached drawings.

Referring to the drawings, wherein like characters indicate like parts throughout the several views:

Fig. 1 is a plan view of a blank embodying my invention in generally flat position;

Fig. 2 is a view in perspective of a partially closed carton formed from the blank of Fig. 1;

Fig. 3 is a perspective view of the carton of Fig. 2 in totally closed position;

Fig. 4 is a perspective view of my novel carton showing the handle elements moved to their operative position; and

Fig. 5 is a transverse section, taken substantially on the line 5—5 of Fig. 4.

My novel carton is made from a single blank 1 of sheet material, preferably light-weight cardboard or the like. The blank 1 is generally rectangular in form and is scored to provide longitudinally-extended fold lines 2 and transverse fold lines 3. The front lines 2 and 3 define opposed side walls 4 and 5, end walls 6, a glue flap 7, and top and bottom closures. The bottom closures include end flaps 8 integrally formed with the end walls 6 and side flaps 9 integrally formed with the side walls 4 and 5. The top closure includes end flaps 10 integrally formed with the end walls 6 and side flaps 11 integrally formed with the side walls 4 and 5.

As shown, the closure flaps 11 are partially severed in generally U-shaped design to provide handle-forming blanks, as indicated at 12. It

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will be noted that the extreme ends of the slit 2 terminate adjacent, but in spaced relation, to the inner edge portions 14. The closure flaps 11 are scored to provide fold lines 15 that extend between opposite ends of the slit 12 to facilitate opening of the blanks 13 with respect to the closure flaps 11 toward their hand-forming positions. It will be noted that the slits 12 at their intermediate portions are bridged by the material forming the closure flaps 11, as indicated at 16, whereby the blanks 13 are normally retained in the plane of the flaps 11. Segmental notches 17 in the closure flaps 11 adjacent the slits 12 permit insertion of fingertips or the like for breaking the bridging portions 16 when it is desired to move the blank 13 into handle-forming position. A plurality of longitudinally-spaced finger-receiving openings extend through the blanks 13 and preferably, and as shown, intersect the fold lines 15 at spaced intervals. End closure flaps 10 are provided with angular slotted openings 19 which are spaced from each other and extend from the intermediate portions of said flaps laterally outwardly to a point indicated by the numeral 20, from whence they extend toward the inner end 21, terminating closely adjacent thereto as indicated at 22. As shown, the slots 19 are preferably of the general shape of the opposite ends of the slits 12, but, in any event, underlie the opposite end portions of slits 12 when folded to the position indicated in Figs. 2 and 3. It will be noted that the closure flaps 10 underlie the closure flaps 11 and are rigidly and securely adhered thereto by a suitable glue or adhesive. The end flaps 10 are scored to provide fold lines 23 that extend from the inner end of each slot 19 to the ends 21 of the flaps 10. The scored fold lines 23 underlie portions of the fold lines 15 when the blank 1 is folded to provide a closed carton. As indicated in Figs. 2, 3 and 4, segmental notches 24 in the inner ends of end flaps 10 register with finger-receiving openings in the opposite end portions of the blank 13.

In forming the complete carton from the blank 1, a suitable adhesive is applied to the glue flap 7 and to the end closure flaps 8. The carton is folded along the transverse fold lines 3 and the flap 7 adhered to the inner side of the free end portion of the side wall 4. The bottom closure flaps 8 and 9, are folded inwardly with the side flaps 9 underlying the end flaps 8, said flaps then being adhered together to provide the bottom closure.

The carton is adapted particularly for carrying goods in cans, such as canned beverages, fruit

juices and the like. Such cans are shown by dotted lines in Figs. 3 and 5 and indicated by the character *x*. When the carton is filled with the cans *x*, the end flaps **10** are folded inwardly and the upper surfaces thereof coated with a suitable adhesive. The side flaps **11** are then folded inwardly and adhered to the end flaps **10** to provide the top closure.

The handle-forming blanks **13**, normally lying within the plane of the top closure flaps **11**, provide a relatively flat upper surface to the carton. This arrangement enables the filled cartons to be easily stacked to an appreciable height for storage, shipment and display.

From the above, it should be obvious that when the cartons of Figs. 2 to 5, inclusive, are formed from the blank **1**, and the closure flaps **11** adhered to the closure flaps **10** as at Fig. 3, moving of the handle-forming blanks **13** toward each other, as indicated in Figs. 4 and 5, will cause the portions of the flaps **10** underlying the blanks to move therewith. This movement, of course, severs the bridging portions **16** and the end portions of the flaps **10** adjacent the ends **22** of the slots **19**. Thus it will be seen that the handles formed from the blanks **13** are of double thickness at their opposite ends (see particularly Figs. 4 and 5).

While I have shown a commercial embodiment of my device, it will be understood that the same is capable of modification without departure from the scope and spirit of the invention as defined in the claims.

What I claim is:

1. A carton made from a blank sheet of material, said blank including side and end wall sections and top and bottom closures, said top closure including a pair of end flaps and a pair of side flaps, one of which pairs overlies the other of said pairs in opposed relationship, each of said overlying flaps being partially severed in generally U-shaped design to provide co-operating handle-forming blanks which are adapted to

open toward each other, the underlying pair of said flaps being provided with generally L-shaped slots which follow the line of severance of the opposite ends of the overlying handle-forming blanks and terminate in close proximity to the inner edges of said underlying flaps, fold lines intermediate the free ends of the line of severance defining the handle-forming blanks, and a plurality of alignable finger-receiving apertures in each of said blanks, a portion of each of said apertures intersecting said fold lines, said pairs of top closure forming flaps being rigidly adhered together, whereby when the handle-forming blanks are opened a portion of each of the underlying flaps will adhere to and reinforce the opposite end portions of said blanks.

2. The structure defined in claim 1 in which the opposed overlying flaps terminate closely adjacent each other whereas the opposed underlying flaps are spaced a considerable distance from each other whereby to underlie and reinforce only the opposite end portions of said handle-forming blanks.

HAROLD W. DARR.

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