

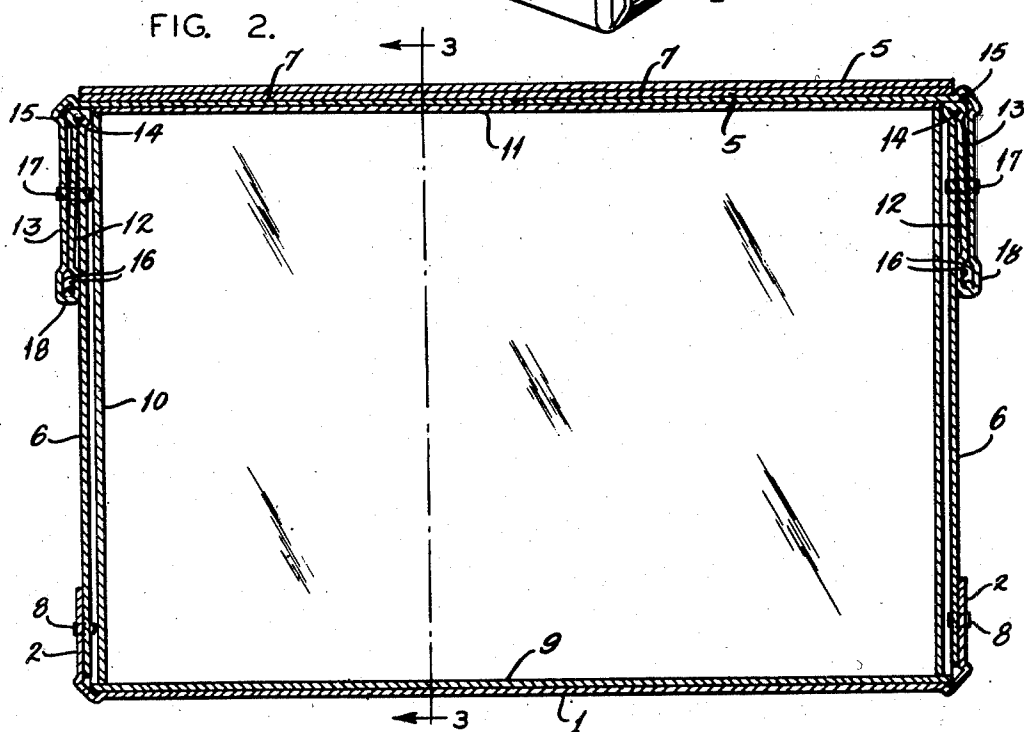
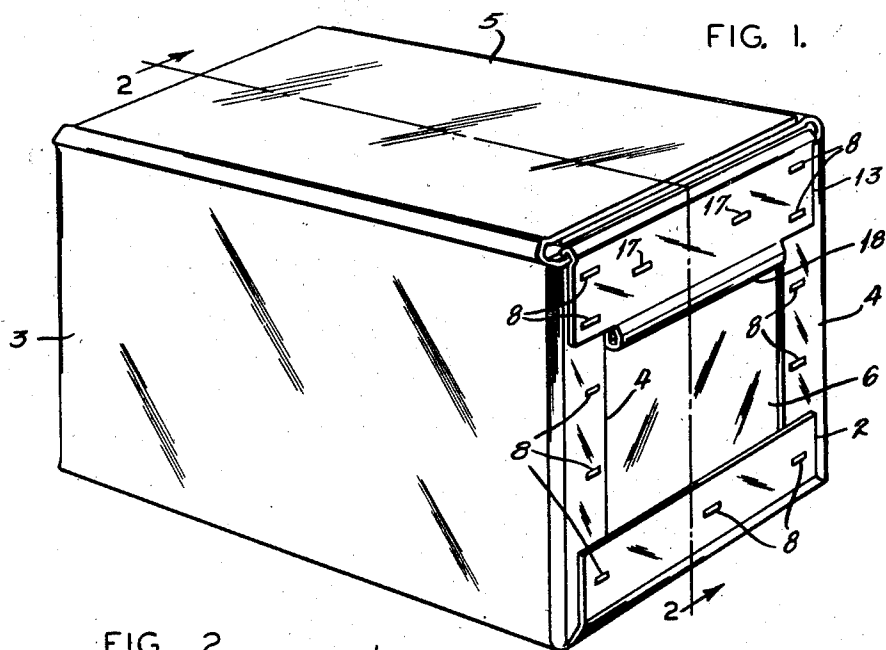
Aug. 1, 1950

F. R. BUHRMASTER  
CARTON

2,517,080

Filed March 25, 1948

2 Sheets-Sheet 1



INVENTOR:

*Fredrick P. Buhrmaster,*  
*by Carr & Carr & Smiley,*  
HIS ATTORNEYS.

Aug. 1, 1950

F. R. BUHRMASTER

2,517,080

CARTON

Filed March 25, 1948

2 Sheets-Sheet 2

FIG. 3.

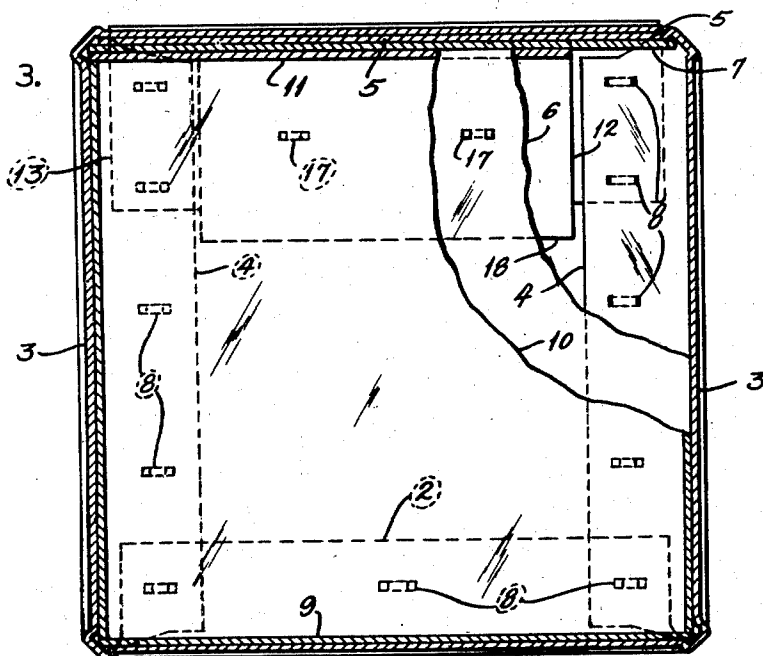


FIG. 4.

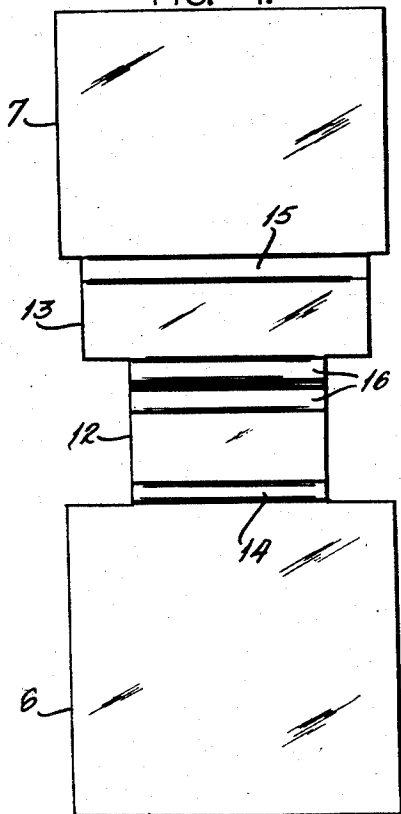
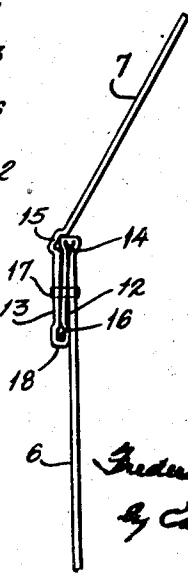


FIG. 5.



FIG. 6.



INVENTOR:

*Fredrick R. Buhrmaster,*  
*By Carr & Carr & Gravelly,*  
HIS ATTORNEYS.

## UNITED STATES PATENT OFFICE

2,517,080

CARTON

Frederick R. Buhrmaster, Webster Groves, Mo.,  
 assignor to Gaylord Container Corporation, St.  
 Louis, Mo., a corporation of Maryland

Application March 25, 1948, Serial No. 17,083

3 Claims. (Cl. 229—23)

1

This invention relates to fiberboard containers, particularly cartons of the type having a bottom and side and end walls with upper marginal closure flaps and flanges formed on the ends of said side walls and bottom and permanently secured flatwise to the outside faces of the adjacent marginal portions of said end walls.

The present invention has for its principal objects to provide each of the end walls with simple and economical means formed integral therewith that will increase the strength and stiffness of the upper portions thereof, that will provide closure flaps along the upper edge of said panel, that will provide a smooth thick exterior finger grip or purchase for lifting the carton and that will provide a lining for supporting the closed closure flap.

The invention consists in the carton and in the construction, combination and arrangements of parts hereinafter described and claimed.

In the accompanying drawings, which form part of the specification and wherein like symbols refer to like parts wherever they occur:

Fig. 1 is a perspective view of a closed carton embodying my invention,

Fig. 2 is a central vertical sectional view on the line 2—2 in Fig. 1,

Fig. 3 is a vertical cross-sectional view on the line 3—3 in Fig. 2,

Fig. 4 is a plan view of one of the end wall blanks for the carton,

Fig. 5 is an edge view of said blank; and

Fig. 6 is a view similar to Fig. 5, showing the blank folded to form the finished end wall.

In the accompanying drawings, my invention is shown embodied in a fiberboard container or carton comprising a bottom 1 with upturned end flanges 2, side walls 3 with intumed end flanges 4 and full-width upper marginal closure flaps 5 adapted to fold one over another, and separate end walls 6 having half length upper marginal closure flaps 7 upon which the closure flaps of the side walls are folded one over another and adhesively or otherwise secured together. The end flanges 2 of the bottom 1 and the end flanges 4 of the side walls 3 overlap and are permanently secured by staples 8 to the outer faces of the end walls 6 along the adjacent margins thereof, the ends of the flanges 2 preferably overlapping the lower ends of the flanges 4.

The carton is preferably provided with a bottom liner 9 that seats on the bottom 1 of the carton, a side and end wall liner 10 that seats on said bottom liner, and a top liner 11 that seats on the upper edges of the side and end liners

2

substantially flush with the tops of the end walls 6 of said carton.

In accordance with the present invention, a single blank is cut and horizontally scored to form each end wall 6 and the closure flap 7 associated therewith, one end portion of the blank forming said end wall and the opposite end portion forming said closure flap. The blank is also provided between the end walls and closure flap portions thereof with an inner fold panel 12 and an outer fold panel 13, the inner fold panel being connected to the end wall portion by a wide heavy score 14 on one side of the blank, the outer fold panel being connected to the closure flap portion by a similar score 15 on the other side of the blank, and the two fold panels being connected by two closely adjacent similar scores 16 on said other side of said blank. The portions forming the end wall 6 and closure flap 7 are of substantially the same width; and the outer fold panel 13 terminates short of the sides of said closure flap, while the inner fold panel 12 terminates short of the ends of said outer fold panel.

As shown in the drawings, the inner fold panel 12 is folded along the score 14 down upon the outer face of the end wall 6, the outer fold panel 13 is reversely folded along the double scores 16 down on the folded inner fold panel, the folded inner and outer fold panels are permanently secured together and to the end wall 6 preferably by staples 17, thus leaving the closure flap 7 free to swing vertically on the score 15 as a hinge. The folded end wall blank is then secured in place in the manner above described with the shorter inner fold panel 12 preferably snugly fitting between the intumed end flanges 4 of the side walls 3 and with the end portions of the longer, outer fold panel 13 overlapping the upper end portions of said end flanges and permanently secured thereto by the staples 8 which secure said upper end portions of said end flanges to the end wall 6.

By the arrangement described, the half length closure flaps 7 of the end walls 6 may be folded downwardly on the top liner 11 and supported thereon with their free ends in substantially abutting relation midway of the length of the carton, after which the full width closure flaps 5 of the side walls 3 are folded downwardly one over another upon the end wall closure flaps and are adhesively or otherwise secured together. The folded inner and outer fold panels 12 and 13 of each end wall 6 are permanently secured to-

3

4

gether and to said end wall and the outer fold panel 13 is also secured at its ends to the inturned end flanges 4 of the side walls 3, thus greatly strengthening and stiffening the upper end portions of said end wall; while the hinged extension of the outer fold panel 13 provides the closure flap 7 along the upper end of such stiffening and strengthening upper end portion of said end walls. The shorter inner fold panel 12 fits between the opposing edges of the inturned end flanges 4 of the side walls 3 and thus further increases the stiffness of the upper end portion of the carton in directions transversely thereof. The deep double score portions 16 along which the outer fold panel 13 is folded forms a thick, rigid hollow bead 18 along the lower margins of the folded inner and outer fold panels 12 and 13 which further increase the strength and rigidity of the end walls and provides a relatively wide grip or purchase for the fingers in lifting the carton. This exterior lifting ledge or grip is particularly advantageous in handling cartons without hand holes in the ends thereof.

What I claim is:

1. A carton comprising an end wall and side walls having end flanges overlapping the outer face of said end wall, said end wall having a panel that is folded downwardly from the upper edge of said end wall along the outer face thereof between the opposing edges of the end flanges secured thereto, a panel that is folded upwardly from said downwardly folded panel along the outer face thereof and has end portions that project beyond said downwardly folded panel and

overlap the outer faces of said end flanges, and a closure flap extending from the upper margin of said upwardly folded panel and adapted to be folded inwardly across said upper edge of said end wall, means for securing together the three plies formed by said folded panels and end wall and the three plies formed by said end wall, said end flanges and said projecting end portions of said upwardly folded panel.

2. The combination set forth in claim 1 wherein separate securing means is provided for each of the two three-ply formations, whereby the folded panels are adapted to be secured to the end wall prior to its application to the carton.

3. The combination set forth in claim 1 wherein the folded panels are connected along their lower edges by an enlarged bead which seats against said end wall between said end flanges with its outside face disposed outwardly of said upwardly folded panel so as to provide a wide purchase for the fingers.

FREDERICK R. BUHRMASTER.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

| Number    | Name   | Date           |
|-----------|--------|----------------|
| 1,119,208 | Weiss  | Dec. 1, 1914   |
| 1,428,597 | Lemon  | Sept. 12, 1922 |
| 1,622,525 | Lemon  | Mar. 29, 1927  |
| 1,800,816 | Cooley | Apr. 14, 1931  |
| 2,228,604 | Luce   | Jan. 14, 1941  |