

Jan. 15, 1929.

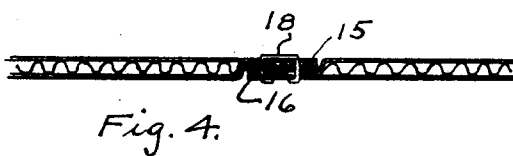
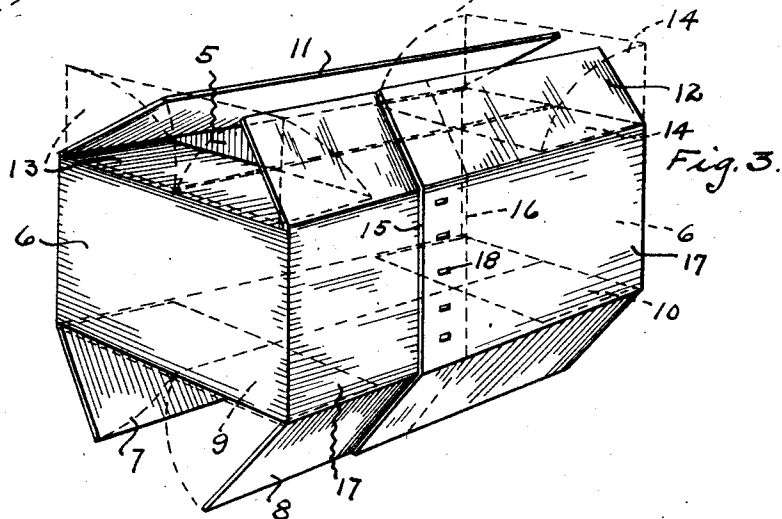
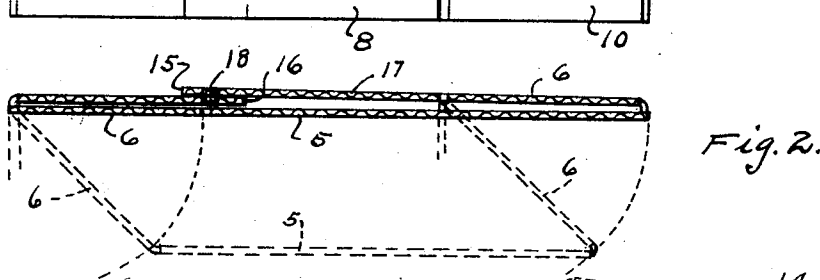
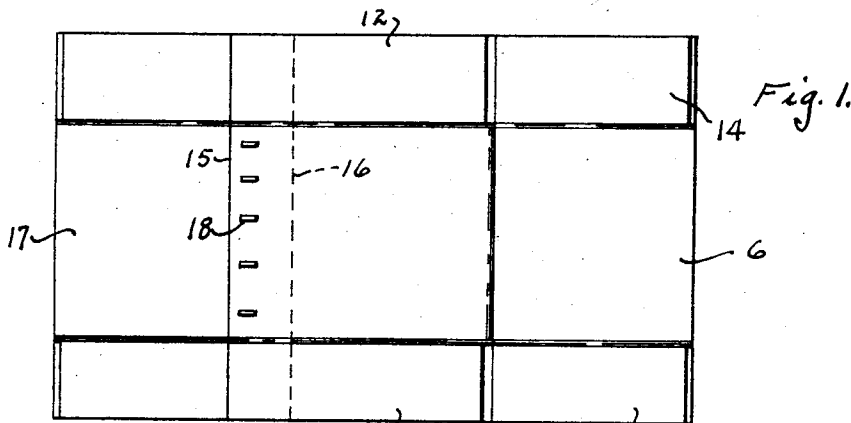
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1,698,908

CARTON

Filed Oct. 30, 1925

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

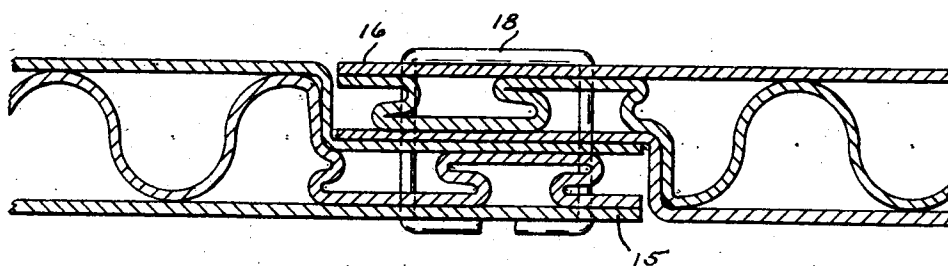


Fig. 5.

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UNITED STATES PATENT OFFICE.

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CARTON.

Application filed October 30, 1925. Serial No. 65,731.

My invention relates to corrugated fiber board cartons and particularly to means of joining the ends where the carton is formed from one or more pieces of stock.

5 Heretofore, it has been the practice to cut out the carton in a single piece of stock such that the side walls are formed by bending the stock about scores to form the corners and bringing the two ends of the stock together at a corner, at which line an adhesive tape strip of paper or woven material was placed over the abutting ends of the two joining sides. It has been found that such a taped corner as formed as above described 15 will not stand up as well under ordinary shipping conditions as the other corners of the box. The walls of the carton adjacent to the taped corner tend to bulge outwardly, especially so, when the filled cartons are stacked one upon the other, and such bulging tends to loosen and open up the adhesive tape formed corner to the detriment of the container itself. The entire strength of the corner is dependent upon the strength of the tape and its adhesive qualities. 25

Furthermore it has been found that the heretofore customary joint so formed by abutting the end of adjacent sides at a corner and covering the corner by tape, will open up under some conditions in storage, as moisture affects the adhesive qualities of the tape and permits it to loosen and let loose from the side walls. 30

It is the primary object of my invention to 35 form a junction of the ends of the material bent around to form the carton such that the junction will not only be absolutely secure but stronger and a reinforcement and stiffener to the side wall. Other objects reside in the creation of a pilfer-proof carton, and in the increased production of cartons by permitting the use of automatic machinery. An important feature of my invention is that in 40 so forming and locating the junction of the ends not only is the use of automatic machinery permitted, but an improved type of machine may be used to effect a better joint as well as greatly increase the production. 45

I accomplish these objects and such other objects as will become apparent in the following description by the means as illustrated in the accompanying drawing, in which 50

Fig. 1 is a side elevation of a carton in a flattened condition for storage or shipping

in quantities showing the means of joining the ends of the stock; Fig. 2, a top plan view, indicating by dash lines how the carton is opened up from the flat condition; Fig. 3, a perspective view of a carton showing how it is set up for use; and Fig. 4 is an enlarged 60 section of a modified lap joint where the ends are compressed; and Fig. 5 is a section of the lap joint on a much greater enlarged scale.

Like characters of reference indicate like parts throughout the several views of the drawing. 65

I score and cut slots in a piece of built up corrugated straw-board to define the side wall 5, and end walls 6, the bottom side flaps 7 and 8, the bottom end flaps 9 and 10, and the corresponding top side flaps 11 and 12 and the top end flaps 13 and 14 and fold the two ends 15 and 16 back along the wall corner scores to lap over one upon the other to form the second side wall 17. It is obvious that 75 the junction of the ends as described may be made on the end walls 6 as well as on the side walls.

The two ends 15 and 16 are here shown as being secured one to the other by staples 18, 80 which may be inserted and clinched by an automatic machine. The ends 15 and 16 may also be joined by using an adhesive between the contacting surfaces, by using an adhesive tape, or stitching or by a combination of any two or all four of the means stated. 85

Where the simple lapped joint as shown in Figs. 2 and 3, is found objectionable on account of the projecting corner of the top end 15, I compress the ends 15 and 16, and lap 90 them as above described, but as the ends are compressed over the lapped area, a smooth surface both inside and outside the carton is had, as indicated in Figs. 4 and 5.

For storage purposes, or when shipping a 95 quantity of the empty cartons, they are left flat as in Figs. 1 and 2. To be formed for use the carton is opened out to a rectangular shape by swinging the sides around through the dash line position as shown in Fig. 2. 100 The bottom end flaps, 9 and 10 are then folded inwardly as indicated in Fig. 3, after which, the bottom side flaps 7 and 8 are folded up against the end flaps 9 and 10 and thereon secured by an adhesive, staples or tape as described. The carton is then ready for filling 105 and the top end and side flaps may be folded over and down to form the top enclosure in

the same manner as the bottom. The folding of the flaps 9, 10, 13 and 14 may be reversed to be on the outside, if desired.

It will be noted in Fig. 3, that the ends 15 and 16 form the lapped joint not only along the side of the carton but also on the top and bottom flaps. By so lapping the ends instead of merely abutting them as has been the practice heretofore, the side is reinforced and stiffened instead of being weakened, and as the lap extends from the sides around onto both top and bottom flaps, admission to the carton for pilfering purposes can not be readily had through the joint. Pilfering of the old style cartons with the abutted ends covered by a tape frequently occurred by soaking off the tape, spreading, apart the ends (the joint being at the corner made such operation easy), taking out what was wanted, and

then pasting the tape back over the joint. Such methods can not be used in opening my carton, as the lap interferes.

My invention is equally well adapted to cartons of shapes varying from that herein shown, and structural changes may be made without departing from the spirit of the invention. I therefore, do not desire to be limited to the precise form as shown, nor any more than may be necessitated by the following claim.

I claim:

In a corrugated board container, a joint formed by overlapping two ends of the corrugated board, said ends being partially compressed and in contact one over the other, and means for securing said ends together.

In testimony whereof I affix my signature.
MINOT CLEVELAND.