

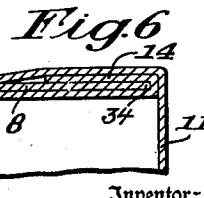
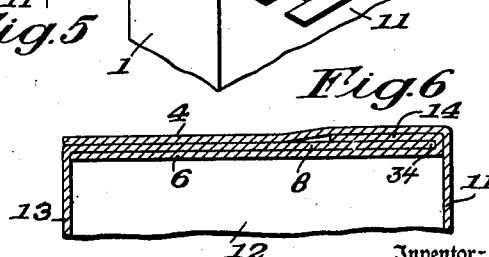
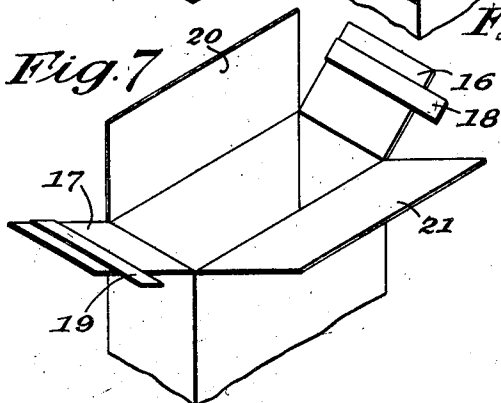
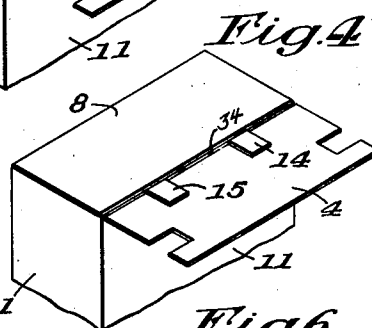
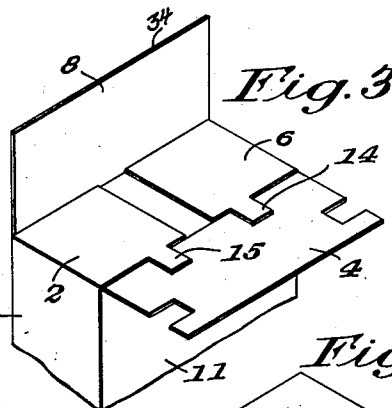
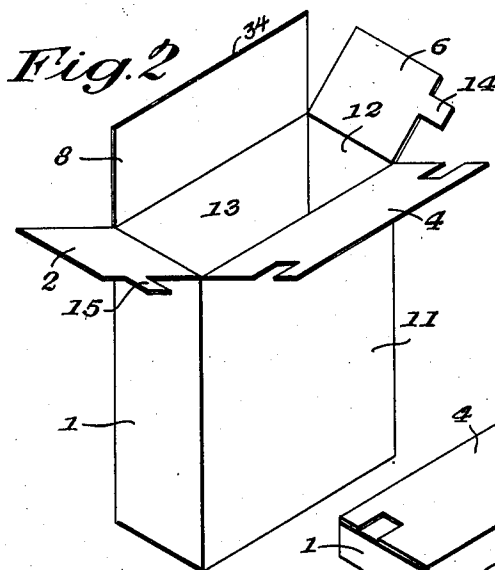
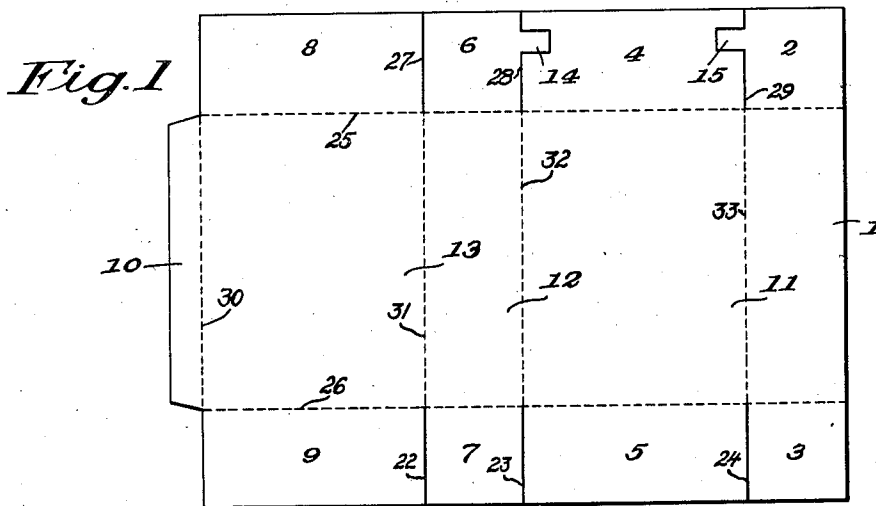
Sept. 14, 1943.

F. W. LANIGAN

2,329,628

CONTAINER

Filed Aug. 5, 1940



Inventor:
Francis W. Lanigan
Chas. J. Gates

Attorney

UNITED STATES PATENT OFFICE

2,329,628

CONTAINER

Francis W. Lanigan, Belmont, Mass., assignor to
Dewey and Almy Chemical Company, North
Cambridge, Mass., a corporation of Massachu-
setts

Application August 5, 1940, Serial No. 351,533
In Great Britain August 11, 1939

1 Claim. (Cl. 229—39)

The present invention relates to containers and, more particularly, to cartons formed from paper, cardboard or millboard stock by creasing and folding a blank to the shape desired and then closing its seams with adhesive.

In making cartons of the type which has a series of flaps at each end which are folded inwardly in succession and adhesively secured to form closures for the ends of the carton, the customary practice is to first form a died-out blank into a tube open at both ends and to then form the bottom closure by folding the flaps together and securing them with adhesive. During this operation the carton is placed upside down over a shoe, whereby pressure may be applied to the flaps from both inside and outside. The carton must be filled before the top end can be closed and it is then impossible to apply pressure to the flaps of the top end from the inside of the carton, with the result that effective sealing of the top end is difficult to attain.

It is therefore a principal object of the present invention to provide a carton of the type indicated, whose top end may be effectively sealed. A further object is to provide a carton having an arrangement of flaps such that the innermost flap may be held up against the sealing pressure after the carton has been filled.

In general the objects of the invention are accomplished by providing at least one of the flaps with a tab or projection so arranged that it may be caught and held between certain others of the flaps as the flaps are folded together. Then as sealing pressure is applied from the outside the innermost flap is held by the tab or projection against substantial movement into the interior of the carton.

An illustrative embodiment of the invention is shown in the accompanying drawing: in which,

Fig. 1 is a plan view of a carton blank before folding;

Fig. 2 is a perspective view of a carton completed except for sealing of the top;

Figs. 3, 4 and 5 illustrate successive steps in the closing of the top;

Fig. 6 is a transverse section through a tab on the line 6—6 of Fig. 5; and

Fig. 7 is a perspective view similar to Fig. 2 but illustrating a modification.

Referring to the drawing, a completed carton blank as it exists after it has been died from sheet stock is shown in Fig. 1. Panels 1, 11, 12 and 13 defined by top and bottom score lines 25, 26 and score lines 30, 31, 32 and 33 are adapted to form the side and end walls of the completed

carton body. A strip 10 adjacent panel 13 is arranged to be adhesively secured to panel 1 to form the side seam of the carton. Flaps 3, 5, 7 and 9 are formed at one side of the blank by cuts 22, 23 and 24 and score line 26. In the completed carton these flaps are folded inwardly and secured together to form the bottom closure of the carton. At the opposite side of the blank, flaps 2, 4, 6 and 8, which are to form the top closure, are defined by cuts 27, 28 and 29 and score line 25. Cuts 28 and 29 are shaped to provide tabs 14 and 15 on flaps 6 and 2 respectively for a purpose to be described later.

The blank of Fig. 1 is formed into the carton shown in Fig. 2 in the conventional manner, by folding along score lines 30, 31, 32 and 33 to form the tubular body of the carton and then folding the bottom flaps 3, 5, 7 and 9 together and cementing them to form the bottom closure. The carton in this condition may be provided with an overall waterproofing coating of paraffin or other suitable coating composition if desired. Following customary practice, the flaps at some stage of manufacture prior to sealing are provided with adhesive coatings on such of their faces as are to be joined together in the completed carton.

After the carton has been filled, the top end is closed by successively folding flaps 2, 6, 8 and 4 in the manner shown in Figs. 3, 4 and 5. First the flaps 2 and 6 are folded into closed position as shown in Fig. 3. The wide flap 8 is then folded down on flaps 2 and 6. As shown in Fig. 4 the tabs 14 and 15 now project beyond the side wall 11 of the carton and overlie flap 4. The flap 4 is now folded to the position shown in Fig. 5. As flap 4 is closed the tabs 14, 15 are bent around the outer edge 34 of flap 8 and are caught between the two outermost flaps 4 and 8 in the manner shown in Fig. 6. When the closure is completed by applying pressure to the outside surface of flap 4, the innermost flaps 2 and 6 are held up against the pressure by tabs 14 and 15, assuring the formation of an adequate adhesive bond between the upper surfaces of flaps 2 and 6 and the inner surface of flap 8. It is apparent that the tabs may take other forms than that shown; thus they may be formed by separate strips 18, 19 (Fig. 7) secured to the inner surface of the small flaps 16, 17. It is preferred, however, to form them of one piece with the innermost flaps because of the saving in material this arrangement permits. A larger or smaller number of tabs than that shown may be used as the circumstances indicate or require, and any one

flap may be provided with tabs on opposite edges if desired.

Those skilled in the art will appreciate that the inventive idea disclosed will find utility in cartons or containers of various forms widely different from the simple carton selected for the purpose of illustration.

I claim:

A carton comprising side and end walls, a bottom for the carton formed by flaps integral with the side and end walls folded inwardly in succession and adhesively secured together, and flaps at the top end of the carton extending in continuation of the side and end walls, separated therefrom by score lines, and adapted to be folded inwardly in succession and adhesively united to

form a closure for the top of the carton, the flap extending from an end wall having a tab projecting in the plane of the flap from an edge which is parallel to a side wall and positioned to project laterally beyond said side wall when said flap is folded into closed position, and the flap extending from the side wall opposite the tab being of sufficient width to engage the tab when the flaps are folded into closed position, whereby when the carton is closed the tab is folded and caught between said last-mentioned flap and the other side-wall flap to hold the first folded flap up against sealing pressure applied to the closed top end of the carton.

FRANCIS W. LANIGAN.