G. A DENISON.
PAPER-BOXES.

No. 193,932. Patented Aug. 7, 1877.

Fig. 1.

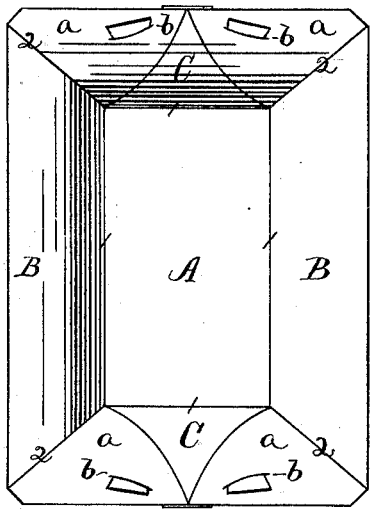


Fig. 2.

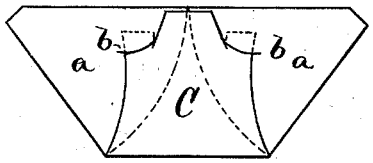
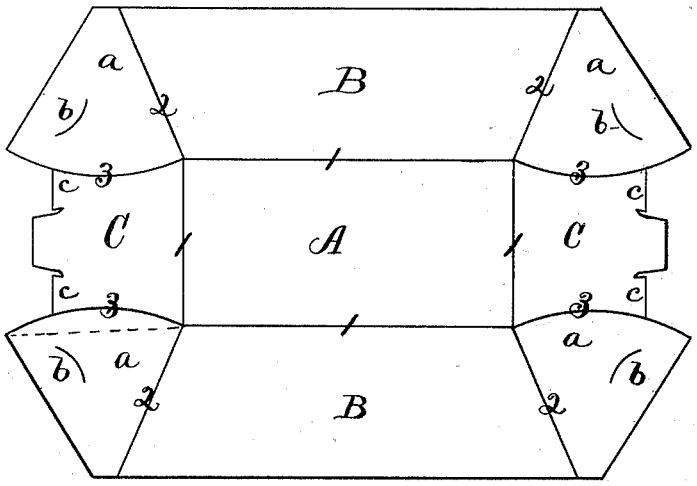


Fig. 3.



Witnesses:
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GEORGE A. DENISON, OF CHICOPEE, ASSIGNOR TO HIMSELF, J. P. BUCKINGHAM, OF SAME PLACE, AND O. M. HAMILTON, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN PAPER BOXES.

Specification forming part of Letters Patent No. **193,932**, dated August 7, 1877; application filed May 12, 1877.

To all whom it may concern:

Be it known that I, GEORGE A. DENISON, of Chicopee, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Paper Boxes for a Butter-Carrying Dish, of which the following is a specification:

My invention consists of the peculiar construction of the parts, as hereinafter described.

In the accompanying drawings, Figure 1 is a top view of a box which embodies my invention. Fig. 2 is an end view of the same, and Fig. 3 is a plan view of the same in the flat.

The box or dish herein shown and described is principally designed for grocers' use for carrying butter, lard, &c., to consumers. I prefer for this use to make the box with a rectangular bottom and flaring sides; but other shapes might be employed—as, for instance, one with upright sides—and still embody the main features of the invention, to wit, the peculiar lock for securing the sides. This class of paper boxes is now well known, and for convenience I will call boxes of this class "self-locking boxes."

A designates the rectangular bottom; B B C C, its respective side or main flaps, and *a a a a* its corner or supplemental flaps. The lines 1 1 1 1 designate scorings at the junction of the sides and bottom, and 2 2 2 2 scorings at the junction of the side flaps B B and corner flaps *a a a a*. These scorings may be formed in any ordinary manner, and preferably upon the inside of the box. The curved lines 3 3 3 3, Fig. 3, indicate the dividing-line of the flaps C C and *a a a a*—that is, their meeting edges—the stock being completely severed on said lines. Each of the corner flaps *a a a a* is provided with slits *b*, standing at an angle of about forty-five degrees to the length of the box-bottom, and transversely to a line radiating from the corners of the bottom, said slits being preferably slightly curved. The main flaps C C are provided each with two short slits, which divide the ends of said flaps into three parts, the two side ones of which form short lugs or projections *c c*, of a proper width to pass through the slits *b* to lock the sides in position, as shown in Figs. 1 and 2. The dividing-lines 3 3 3 3, which form the edges of the corner flaps and end main flaps C C, are merely cut through the stock without removing any great body of said stock, and they are curved for the purpose of giving greater strength to the box, and also to make the outer edges of the lugs *c c* slightly hooked, thus forming a better lock. It is evident that the dividing-lines of main and corner flaps must end at the several corners of the box-bottom, and in Fig. 1 it will be observed that the other corners of the supplemental or corner flaps meet each other when the box is set up for use, so that these corners are in the desired position for the shape of box shown. A straight line from the outside to inside corners of these flaps is shown at the lower left-hand corner in Fig. 3, the same being indicated in broken lines, and if the edges were straight in this shaped box they must necessarily be on said broken line. It will readily be seen that if the edges of the flaps were thus formed, the slit *b* would come much nearer the edge, and consequently be more liable to tear out; that the lug *c* would be much wider, and wider than is necessary, and consequently the slit *b* would have to be considerably elongated, which would, of course, weaken the body of the flaps *a a a a*, and that the outer edge of said lug would not be of the desired hooked form. By making the dividing-line, or edges of the flaps which meet when the box is in the flat, in curved form, as shown, the lugs *c* are wide enough for strength without being too wide, and their outer edges are of the proper shape. The slit *b* is of the desired length, and is located such a distance from the edge of the flap as to give the same ample strength.

The box may be shipped in the flat or knock-down form, as in ordinary self-locking boxes, or it may be nested for transportation, as in other flaring boxes, after being set up or formed.

In setting up the box the several flaps are bent on the line of their scorings, the corner flaps *a a a a* passing inside of the end flaps C C, the outer corner of the lugs *c c* entering the ends of the slits *b* on approaching them, and then passing wholly through said slits, the

stock at one end of the slit resting in the short slits of the flaps C, and the stock at the opposite end of said slits resting against the hooked outer edge of the short lugs *c c*, as shown in Figs. 1 and 2, and locking the sides of the box firmly together.

I have herein described the box as made with scorings; but the same-shaped box might be formed of thin paper by making angular bends at the junction of the bottom and flaps without previous scoring, or the box might be formed with rounded bends instead of angular ones, giving the box a sort of oval shape instead of rectangular, but cut out in the same shape, the difference being solely in the manner of setting up.

I claim as my invention—

1. In a self-locking box having main and supplemental flaps, the flaps C C and *a a a a*, having curved edges on lines 3 3 3 3, in conjunction with the devices which render the box a self-locking one, substantially as described, and for the purpose specified.

2. A self-locking box consisting of the main flaps B B and C C, the latter divided into three parts at the end by short slits, two of which parts form lugs *c c*, and the supplemental flaps *a a a a*, having curved inner edges and slits *b*, substantially as described, and for the purpose specified.

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