

(No Model.)

G. D. SEIB.

PAPER BOX.

No. 341,859.

Patented May 11, 1886.

Fig. 1.

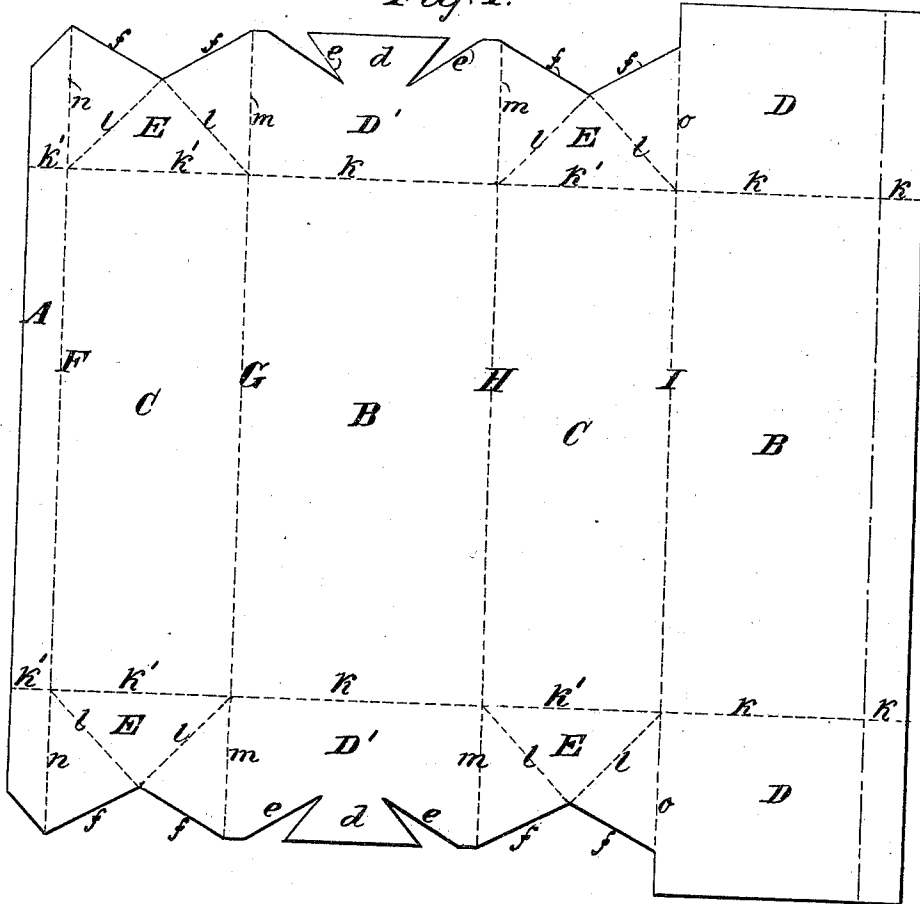
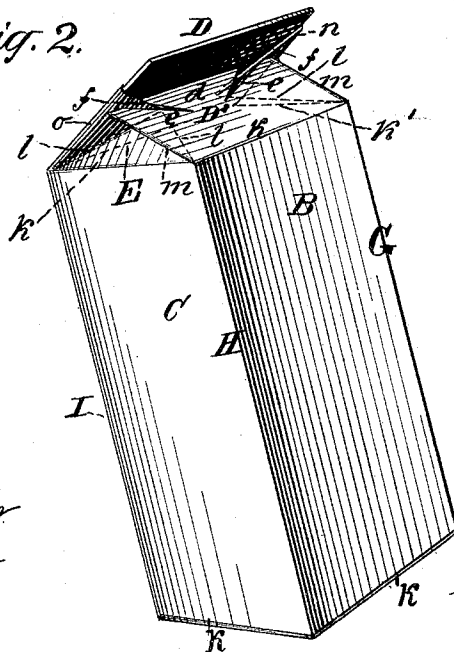


Fig. 2.



WITNESSES

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PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 341,859, dated May 11, 1886.

Application filed March 29, 1886. Serial No. 196,870. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DAN. SEIB, a citizen of the United States, residing at Richmond Hill, Queen's county, Long Island, New York, have invented an Improvement in Paper Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification.

My invention relates to that class of paper boxes which are employed for packing loose articles—such as starch, tea, spices, &c.—which boxes do not have covers in the ordinary sense of the term “cover,” but are provided with folding tucks, flaps, &c., for closing the ends of the boxes when the flaps and tucks are folded into position and sealed, to hold them in position for transportation, storage, &c.

Figure 1 represents the pattern or form to which the paper is cut in order to make the boxes, the dotted lines drawn on said form indicating the lines upon which the paper is folded when it is formed into the boxes. Fig. 2 represents the box after it has been formed into rectangular shape and is ready for filling and sealing, one end of the same having been already sealed.

Similar letters of reference refer to similar parts in both figures.

A, Fig. 1, represents the margin or flap by which, when the boxes are formed into rectangular prismoidal shape, the meeting edges of the form or pattern are joined by cementing, or in any other suitable manner.

B represents the two broader sides of the box when it is formed into prismoidal shape, and C C represent the two narrower sides of the same; but it is evident that it is not necessary to make two of the sides wider than the other two, as the box may be as easily made square in cross-section as oblong, and the proportions adopted for the sides of the box used for different articles will in nowise affect the character of my invention, which relates wholly to the method of cutting the pattern, or that part of it which forms the tucks and flaps, and to the method of folding the same for closing the ends of the box and sealing.

D D' represent the flaps. The flap D is rectangular in form. The flap D' is cut with a dovetailed tongue, *d*, the tongue *d* being

formed by cutting out triangular gores *e* from said flap in such manner as to leave a form resembling one of the elements of a Maltese cross. 55

Between the flaps D and D', on each end of the form when folded, as hereinafter described, for the ends of the box, is a tuck, E; also, between the flap D and the margin A is another tuck, E, precisely similar to the one between D and D'. The tucks E have at their outer margins a gore, *f*, cut from the same, said gore being triangular in form, having the apex of the triangle toward the parts of the form lettered C, and terminating at the point where the folding-lines meet. 65

The lines of folding which form the outer angles of the box when folded into box form and cemented, as hereinbefore explained, are shown at F G H I. When folded into rectangular form, as shown in Fig. 2, the line I lies opposite the line H on the same side, the lines G and H are opposite each other on the same side of the boxes, and, lastly, the lines F and I are opposite each other on the same side of the boxes. The margin A, lying outside of the line F, then is folded under the outer margin of the side B to a distance indicated by the line which is formed with long and short dashes, said line being so formed to distinguish it from the dotted lines, which indicate folds. When so folded under the side B, the margin A is cemented to the side B in any suitable manner, and the box then retains the prismoidal form. 80

The flaps D and D' have no lines of folding, except the lines *k*, upon which they are folded to bring them down over the ends of the boxes, as shown in Fig. 2, and the lines *m* and *o*, which form their junctions with the tucks E. The tucks E have not only lines of folding, *k'*, upon which they are folded down over the ends of the boxes, as shown in Fig. 2, inclosing the same, but they also have lines *l*, upon which they are folded, so that they may, when the box is brought into prismoidal form, lie flatly under the flaps D and D' in such manner that the tongues *d* can be made to engage both of the tucks E, which lie immediately adjacent to the flap D', and join the same at one edge, as hereinafter described. 95

The lines of folding by which the tucks E are brought under the flaps D' are shown at *m*, and the lines of folding by which the gummed margin A is brought under the tuck E are 100

shown at *n*, it being understood that each of the dotted lines of the folding as illustrated in the drawings and referred to herein applies only to that portion of the dotted line which extends between any two other dotted lines in Fig. 1, or between any dotted line and the margin of the pattern. The lines of folding *l*, which mark the boundary of the flaps D, extend entirely across the line made by long and short dashes to the margin of the pattern, as indicated by lettering, and likewise the lines *k'*, which mark the lines of folding between the tucks E and that portion of the pattern which lies between the margin A and the part B of the pattern, extend entirely out to the margin of the pattern, as shown by lettering. The lines of folding by which the flaps are brought down over the tucks E are shown at *o*, Fig. 1.

In folding the box together after the pattern has been cut in the manner described, the paper is first scored on the lines of folding with the usual cutting-instrument employed for that purpose, and it is then folded over a former in such manner that the margin A is brought under the margin of B to a distance indicated by the line which is formed of long and short dashes, and the underlapping margin is gummed or cemented to the side B over the whole extent of the said margin. The tucks E are then pressed inward, bending upon the lines of folding *l*, *m*, *n*, and *o*. In so bending they pull the upper edges of the flaps D and D' toward each other and spring the tongue *d* between the margin of the tucks E, so that said tongue is engaged between the portions of the tucks which are folded against the flaps D in such manner that when the flap D is brought down upon the outer side of the flap D' to be cemented thereto the tongue *d* is firmly bound and held between the flap D and the portion of the tuck E which is folded against the flap D, and the parts of the flap D' which lie outside of the gores *e* in said flap enter in between the folds of the tucks E, as shown in Fig. 2.

2. At the same time the same margins of the flaps E which engage and bind the tongue D between them and the flap D' are brought down outside of the portions of the flaps D' which lie outside of the gores *e*, as shown in Fig. 2.

The advantages of this method of forming a paper box are, first, economy of stock; second, great security in fastening the box, the tucks and flaps being so joined to each other

that the box is perfectly tight when the flap D is held down upon the flap D', and a very small amount of sealing material is sufficient to hold it in that position. The parts of the tucks and flaps come together with such ease and flexibility that when the box is filled the weight of the material placed in the box provides sufficient pressure to hold the inside of the flap D against the outside of the flap D' until the cement sets and solidifies sufficiently to hold them permanently. It is therefore not necessary to provide any special means for holding these flaps in position while waiting for the cement or gum to solidify. It is sufficient to simply set the boxes on their sealed ends and arrange them in convenient tiers or series, and in a short time each box will be found to be perfectly sealed. Considerable economy of labor in packing is in this way effected, as in many kinds of paper boxes it requires a special appliance to hold the flaps in position till the cement becomes sufficiently solidified to hold the same permanently.

What I claim as my invention, and desire to secure by Letters Patent, is as follows:

1. The form or pattern for a paper box having the flaps D and D' and the tucks E and E', the flaps D being rectangular in form, the flaps D' being cut with gores *e* and the tongue *d*, the form of said tongue thus approximating the form of an element of a Maltese cross, the tucks E being cut with triangular gores *f*, and having lines of folding F G H I, *k* and *k'*, and *l m n o*, all being arranged in the manner herein described, substantially as and for the purpose set forth.

2. A paper box of prismoidal form, provided with flaps D and D', the flap D being rectangular in form, the flap D' being cut with gores *e* and the dovetailed tongue *d*, tucks E, each having therein a triangular gore *f*, said flaps and tucks being folded upon the lines *k k' l m o* in such manner that when the end of the box is closed for sealing the dovetailed tongue is brought between the margins of the tucks E and the flaps D, and the parts of the flap exterior to the gores *e* are made to pass between folds in the tucks E, substantially as herein described, and for the purpose set forth.

GEO. DAN. SEIB.

Witnesses:

H. E. KETCHAM,
A. D. HENRIQUES.

Correction in Letters Patent No. 341,859.

It is hereby certified that Letters Patent No. 341,859, granted May 11, 1886, upon the application of George Dan. Seib, of Richmond Hill, Long Island, New York, for an improvement in "Paper Boxes," was erroneously issued to said Seib instead of to Hinds, Ketcham & Co., of Brooklyn, New York, assignees of the entire interest in said invention; that the proper correction has been made in the files and records of the case in the Patent Office, and should be read in the Letters Patent to make it conform thereto.

Signed, countersigned, and sealed this 25th day of May, A. D. 1886.

[SEAL.]

H. L. MULDROW,
Acting Secretary of the Interior.

Countersigned:

M. V. MONTGOMERY,
Commissioner of Patents.