

980,931.

Patented Jan. 10, 1911.
2 SHEETS—SHEET 1.

Fig. 1

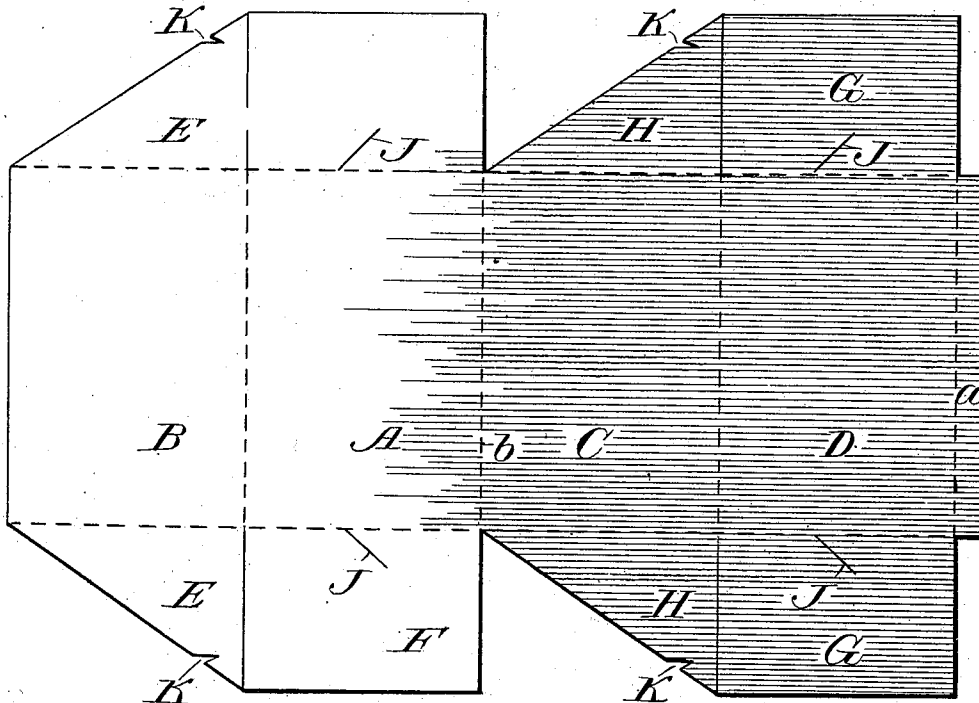


Fig. 2.

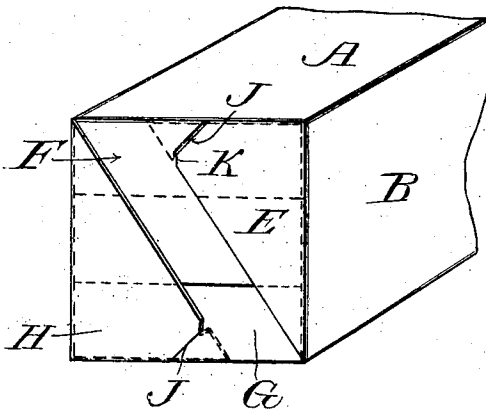
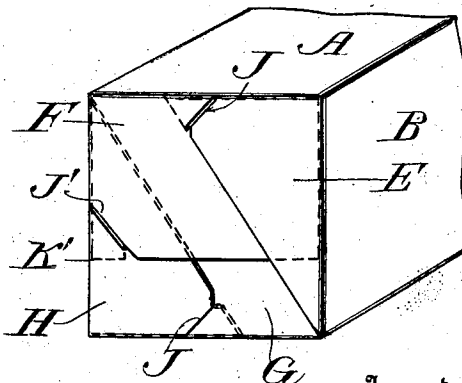


Fig. 3.



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FOLDING PAPER BOX.
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2 SHEETS—SHEET 2.

Fig. 4.

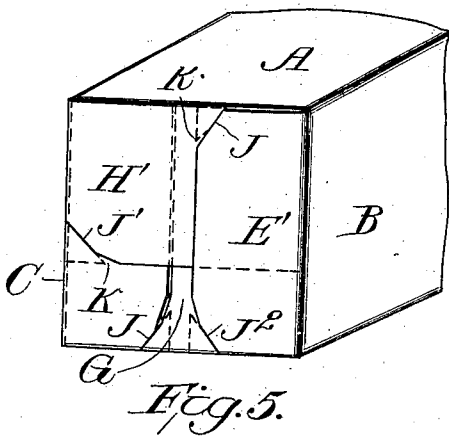
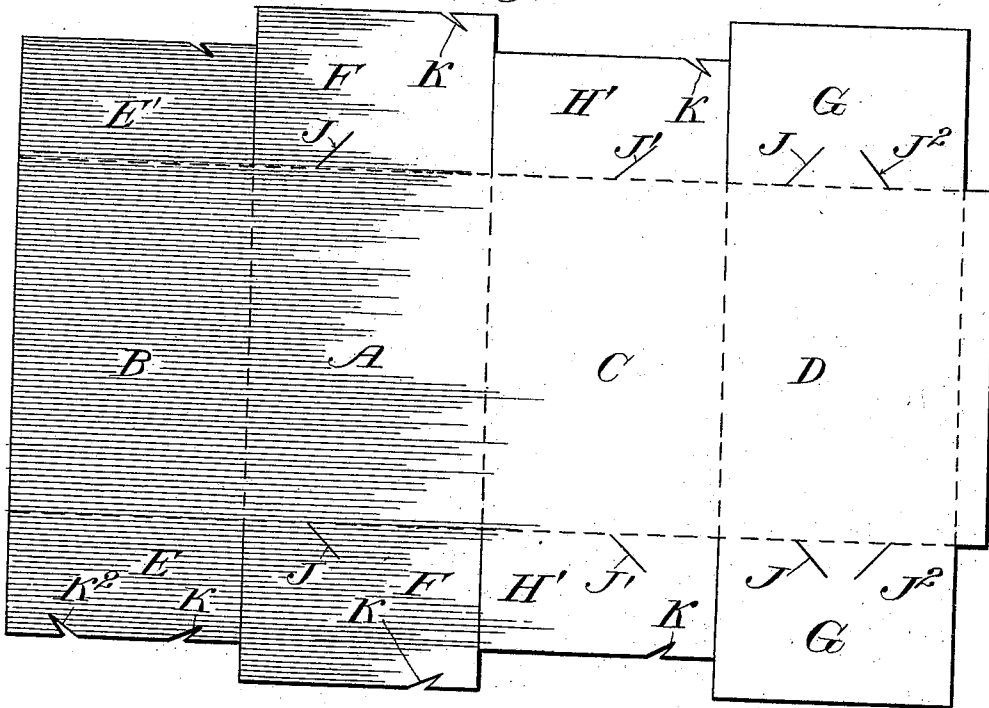


Fig. 5.

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UNITED STATES PATENT OFFICE.

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FOLDING PAPER BOX.

980,931.

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed August 19, 1910. Serial No. 577,983.

REISSUED

To all whom it may concern:

Be it known that I, RAYMOND B. DU VAL, citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Folding Paper Boxes, of which the following is a specification.

This invention relates to paper or paste-board boxes of that type made of a single folded blank, and has for its object to provide improved means for locking flaps which close the ends of the box, the lock being such that pressure from the inside cannot release the same except by tearing the material.

The invention may be embodied in a variety of forms, some of which are hereinafter shown and described. The flaps and locks are so arranged or distributed that they cover or hold each other, and they may be quickly and easily folded to proper form to set up the box and hold articles in place therein.

The nature of the invention will be more fully understood from the following description and the accompanying drawings in which—

Figure 1 is a plan view of the blank of what I term a two-lock box; Fig. 2 is a perspective view of one end of the box, with the flaps in locked relation; Fig. 3 is a perspective view of the end of a modified form, being what I term a three-lock box; Fig. 4 is a plan view of the blank of a modified form, being what I term a four-lock box; Fig. 5 is a perspective view of the end of a box made of the blank shown in Fig. 4.

Referring specifically to the drawings, the boxes illustrated have four sides, indicated at A, B, C and D, and at one end the blank has a flap *a* which is pasted to the opposite end of the blank. In practice, this pasting will be done when the boxes are supplied to dealers, the blank being folded upon its middle line *b* so that two sides rest flatly upon the two other sides, the end flaps lying in the same plane, whereby the boxes can be shipped in small compass.

Each end of the box shown in Figs. 1 and 2 is formed by four interlocking flaps. The side A has a square flap F, and the opposite side D has a square flap G. The side B has a triangular flap E, and the side C has a triangular flap H. The flaps F

and G have slits J extending diagonally, in position to receive the pointed ends of the triangular flaps E and H, which ends are notched as at K to catch in the ends of the slits.

In setting up and locking the box shown in Figs. 1 and 2 the flap G is first folded in and the opposite flap F is then folded in upon the same. The flaps E and H are then folded in upon the flap F, the tongue or pointed end on the former being engaged in the slit J in the flap F, where it is held by the notch K, and the tongue on the latter being engaged in the slit J in the flap G, where it is also held by the notch K. It will be noticed that the flap F is of less length than the full height of the box, so that it does not cover or obstruct the slit J in the flap G, and consequently the insertion of the tongue or end of the flap H into the slit J in the flap G is permitted, and the notch K is in position to effect the engagement of the end in the slit, at the lower edge of the flap F, as clearly shown in Fig. 2. The inner flaps F and G are thus held by the outer triangular flaps E and H, and internal pressure will not cause the box to open except by tearing the material of the flaps E and H.

In the form shown in Fig. 3 the construction is substantially the same, with the addition, however, that the flap F has a tongue at one corner formed by a notch K' arranged to engage in a slit J' made in the triangular flap H; and the manner of folding is somewhat different. That is to say, the flap G is first folded in, then the flap H, then the flap F, and then the flap E. The tongue on the flap H is inserted in the slit J in the flap G, the tongue at the corner of the flap F is inserted in the slit J' in the flap H, where it is caught at the notch K', and lastly the tongue on the flap E is engaged in the slit J in the flap F, as in Fig. 2. This box, therefore, has three locks between the flaps, instead of two, as in Fig. 2.

In the form shown in Figs. 4 and 5 the sides A, B, C and D and the end flaps F and G are substantially the same, as in Fig. 3, the flap F having the slit J and the flap H' having the slit J', and the flap G having in addition to the slit J an additional slit J². The other two flaps are modified, one, E', having tongues at both free corners, produced by notches K and K², the former of which engages in the slit J in the flap F and

the latter of which engages in the slit J² in the flap G, below the lower edge of the flap F, and the flaps E' and H', or at least the former, is made square instead of triangular; and it will be seen that there are four interlocking tongues between the end flaps. In this construction the flap G is first folded in; then the flap H' which is locked thereto; then the flap F which is locked to the flap H'; and finally the flap E' which is doubly locked, at one corner to the flap F and at the other corner to the flap G.

Various other modifications may be made in the scope of the invention, and it may be seen that the invention provides simple means for locking together the end flaps of the four sided box made of a single blank having one pasted edge, and capable of being shipped in flat or knock-down condition; and as compared to boxes made of two blanks or trays, a box constructed according to this invention has the advantage that only a single blank is required, and when the ends of the box are locked they do not have to be tied.

I claim:

1. A box made of a single blank folded to

form four sides of the box, two opposite sides having infolded flaps, one of said flaps having two exposed slits and the other having one slit and a notched corner, and the two other opposite sides having flaps folded in upon said flaps and provided with notched tongues interlocking in said slits respectively, one of the last mentioned flaps having a slit in which said notched corner is interlocked.

2. A box made of a single blank folded to form four sides of the box, two opposite sides having flaps folded in one upon the other and each of said flaps having an exposed slit and one of said flaps having a notched corner, and the two other opposite sides having flaps folded in upon said flaps and provided with notched tongues interlocking in said slits respectively, one of the last mentioned flaps having a slit in which said notched corner is interlocked.

In testimony whereof, I affix my signature in presence of two witnesses.

RAYMOND B. DU VAL.

Witnesses:

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