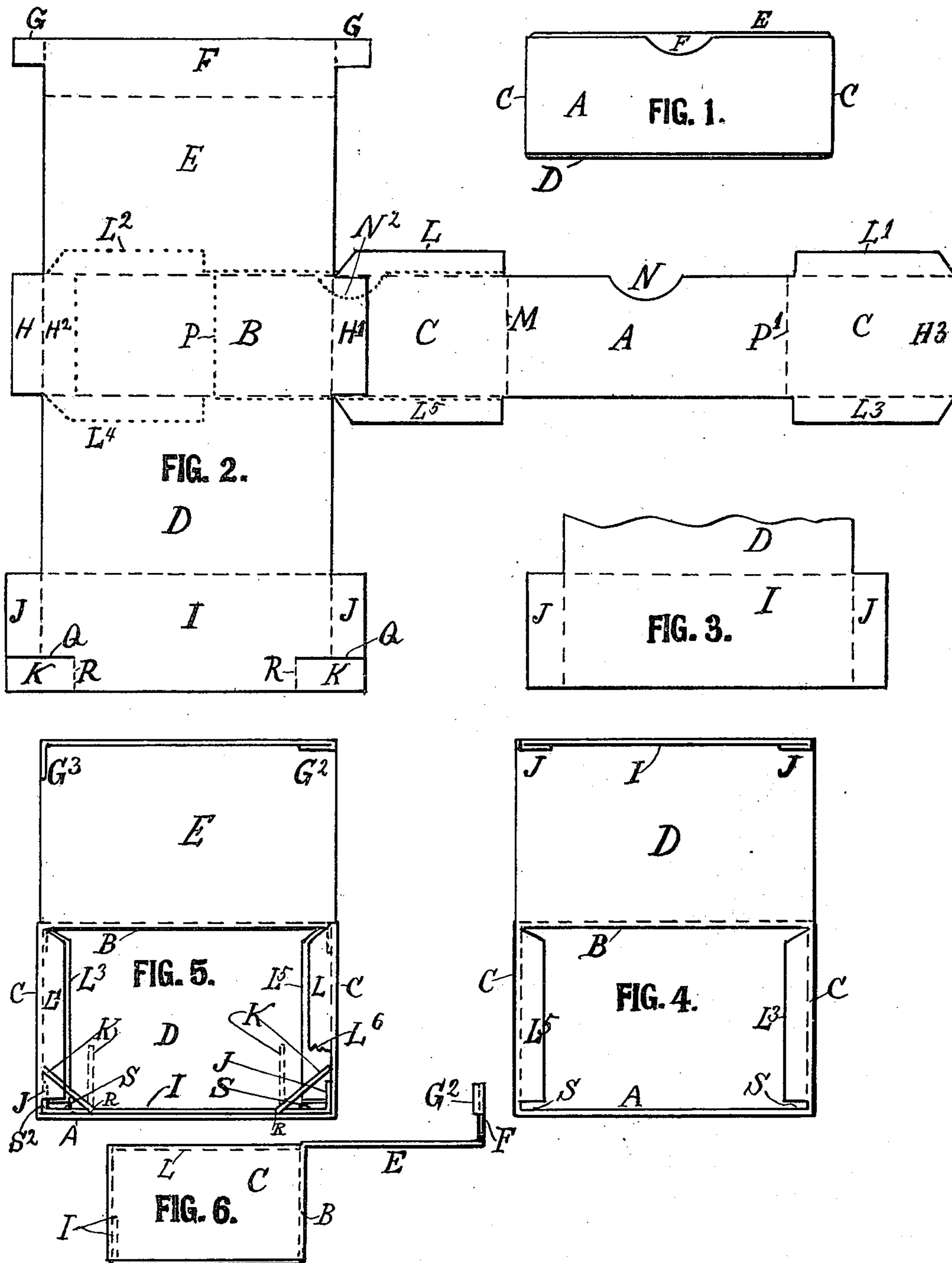


No. 667,532.

Patented Feb. 5, 1901.

M. J. KANE.  
FOLDING PAPER BOX.  
(Application filed June 2, 1900.)

(No Model.)



WITNESSES.  
E. C. Carlson  
D. E. Carlson.

INVENTOR.  
Michael J. Kane.  
BY his ATTORNEY  
A. M. Carlson.

# UNITED STATES PATENT OFFICE.

MICHAEL J. KANE, OF ST. PAUL, MINNESOTA.

## FOLDING PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 667,532, dated February 5, 1901.

Application filed June 2, 1900. Serial No. 18,913. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL J. KANE, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Folding Paper Boxes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in folding paper boxes; and the objects of the invention are, first, to provide a convenient and easily set up folding box in which the bottom is absolutely locked or interlocked with the box, and, second, to provide a folding box with means by which its cover will interlock with the box and not permit of reopening without breaking or tearing some of the parts, so as to thereby tell of unwarranted opening of the box. These objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a front side elevation of my new folding box made on a small scale, like a candy-box of the class usually filled and sold to consumers, box and all. Fig. 2 is a plan view of the blank from which I form the box. The view also shows in short-dotted lines how the box after completed is folded for shipping. Fig. 3 is a modification of the lower portion in Fig. 2 to the left of Fig. 3. Fig. 4 is a bottom view of the box as it appears when ready for the bottom to be folded into place and interlocked. The view also shows how the simplest form of the box looks viewed from the top before the cover is adjusted. Fig. 5 is a top view of the most complete form of the box ready to be filled and have its cover closed and interlocked, with a portion of the upper locking-flange L cut away at L<sup>6</sup>, so as to expose the parts below it. Fig. 6 is an end elevation of the box with the cover open, as in Fig. 5.

Referring to the drawings by letters of reference, A designates the front side, B the

back side, C the ends, D the bottom, and E the cover, of the box.

The blank may be cut in various ways; but in Fig. 2 is shown an inexpensive way in that the cover E, rear side B, and bottom D are cut in one piece with the integral flaps F, G, H, I, J, and K and the front side A and ends C C with their flaps or flanges L, L', L<sup>3</sup>, and L<sup>5</sup> all in one piece and then pasted with the ends to the flaps H and H'. The outlines of Fig. 2 show first the blank as cut and secured together at H', then, also, in lines of very short dots how the body-blank is bent at the crease M and pasted with the end H<sup>3</sup> to the flap H, which is turned inward and shown as H<sup>2</sup>. In this condition the folded box is shipped, with the blank doubled from H to M. The flaps or flanges L' and L<sup>3</sup> are shown to the left as L<sup>2</sup> and L<sup>4</sup>, and the thumb-notch N is shown as N<sup>2</sup>, which fully explains the folded position of the box, from which it may be unfolded and set up for use in a few moments.

In the blank, Fig. 2, all ordinary dotted lines—namely, those having long dots—indicate creases at which the cardboard may be folded. The line P in short dots is the same as the crease P' in the blank. The marks Q are slits clear through the cardboard to form the guarding-flaps K, creased at R for a purpose presently to be described. The flaps K are only used on boxes for candy or other goods the exchange, adulteration, or partial stealing of which it is desired to guard against by interlocking the cover when closed. In a common grade of my box the blank is, as in Fig. 3, without the flaps or guards K, and even the lockers G may be dispensed with.

The flaps L may all be of the same size; but to promote clearness I have in Fig. 5 shown the upper flaps smaller than the lower ones.

In setting up the box the body or sides and ends are first spread into box shape and all of the flaps L are thrown into their normal position, pointing inward over the box. The flap I, with its lockers J folded, as in Fig. 4, is then pushed through the gaps or notches S and allowed to spread inside the box upon the bottom flanges L<sup>3</sup> L<sup>5</sup> to the position shown in Fig. 5, so that the bottom cannot fold down and out without tearing its lockers J or the

flanges  $L^3 L^5$ , or else the lockers J must be folded again and passed down through the notches S, which is the only way to knock down the box. The cover is then closed on the common form of the box by pushing the flap F down through the gaps  $S^2$  (one of which is shown in Fig. 5) inside the front side of the box and outside the flap I, if the latter is high enough to overlap the flange F; but such is not the case on large boxes, where the flap I reaches only a short distance above the bottom, as can be seen in dotted lines I in Fig. 6; but on candy-boxes and other small boxes the flap F is inserted between the front side A and the flap I, which reaches to the top of the box.

Where the box is made with the interlocking feature of the cover, the flap F is provided with the lockers G, which after the box is filled with candy or other goods are folded, as at  $G^2$  in Figs. 5 and 6, let down through the notches  $S^2$ , and allowed to spread to the position indicated at  $G^3$  in Fig. 5. This swinging motion of the lockers G from the one position to the other inside the flaps L and  $L'$  would in the case of candy or other small goods filling the box be hindered by the goods. Hence I provide the guards K, which bend at R and assume the position shown in dotted lines in Fig. 5 while the bottom is being adjusted and then spread to the diagonal position shown in solid lines K in Fig. 5. In the triangular spaces thus formed in the front corners of the box the lockers G have free chance to spread after being inserted through the gaps  $S^2$ , so that the cover cannot be opened without breaking either the upper flaps L  $L'$  or the lockers G. Such breaking or forcible opening of the box is supposed to be done only by the purchaser who is to empty the box and is not supposed to wish to seal or lock it again. Thus the contents of the box cannot be tampered with from the time it leaves the factory filling it with goods until the consumer opens it and gets the genuine goods and full weight.

The boxes may be made of any desired form and size, and in some cases it may be preferable to have all four corners of the bottom and cover interlocked in the manner shown at the front corners; but for ordinary use it will be found preferable to have the bottom and cover jointed at one edge to the box-body about the way shown.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A paper box having its upper edge provided with inwardly-turned flanges, a cover hinged or jointed to the box and provided with lockers adapted to pass beyond the flanges in a folded position and to spread inside the flanges and thus lock the cover; said box having guards to prevent the goods in the box from interfering with the motion of the lockers in changing their position so as to interlock.

2. A folding paper box having its lower edge provided with horizontal end flanges, a bottom hinged to the rear side of the box and provided with lockers adapted to enter upon and interlock with said flanges by swinging or spreading horizontally upon them, and a large flap adapted to project upward inside the front side of the box, and a cover hinged to the top of the box and having a front flap adapted to be inserted between the front side of the box and the upwardly-projecting flap of the bottom.

3. A folding paper box having a body adapted to be folded by pushing two opposite corners outward and the other two corners inward, and having its ends provided with the flanges  $L^3, L^5$ , with adjacent notches, S; the bottom D, having the front flap I with the lockers J at the ends of it, for entering the notches S when folded, and then unfold and engage the upper sides of the flanges, substantially as set forth.

4. A folding paper box having a body adapted to fold by pushing two opposite corners inward, the ends of said box having inwardly-turned flanges L,  $L'$ ,  $L^3$  and  $L^5$  with adjacent clearings S and  $S^2$ ; the bottom D hinged to the box and having the front flap I with the lockers J to engage the flanges  $L^3$  and  $L^5$ , and the guards K; the cover E, hinged to the box and having the front flap F, with the lockers G adapted to enter the box and engage in an interlocking manner the flanges L and  $L'$ , substantially as and for the purpose set forth.

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

MICHAEL J. KANE.

Witnesses:

A. M. CARLSEN,  
J. F. McMOHAN.