J. P. BUCKINGHAM.

PAPER BOX.

No. 186,459. Patented Jan. 23, 1877.

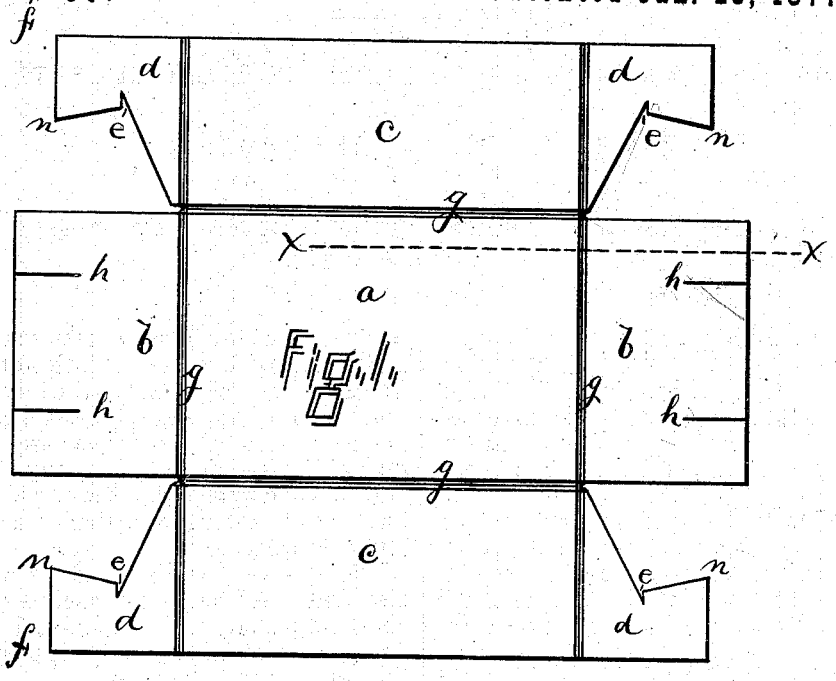

Fig. 1.

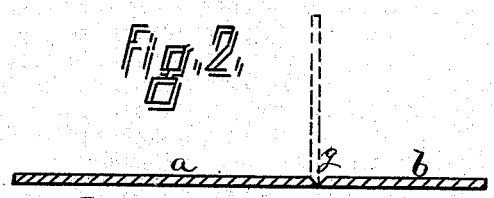

Fig. 2.

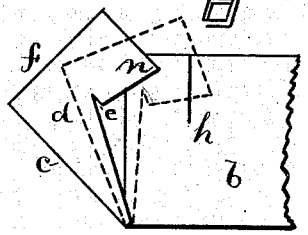

Fig. 3.

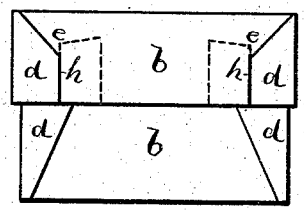

Fig. 4.

Witnesses.
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By James Shepard Atty.

UNITED STATES PATENT OFFICE.

JOSEPH P. BUCKINGHAM, OF CHICOPEE, MASSACHUSETTS.

IMPROVEMENT IN PAPER BOXES.

Specification forming part of Letters Patent No. **186,459**, dated January 23, 1877; application filed April 4, 1876.

To all whom it may concern:

Be it known that I, JOSEPH P. BUCKINGHAM, of Chicopee, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Paper Boxes, of which the following is a specification:

My invention is designed as an improvement on the paper box patented to me November 16, 1875; and consists in the peculiar shape of the short flaps at the corners of the box, so as to facilitate the putting together of the box.

In the accompanying drawing, Figure 1 represents a plan view of a box in knock-down form which embodies my invention. Fig. 2 is a partial section of the same on line *x x* of Fig. 1. Fig. 3 is a partial side elevation of the same, showing the manner of forming or setting up; and Fig. 4 is a side elevation of one of said boxes and its cover as set up in form ready for use.

I form the bottom of the box and its four sides of one piece of material, preferably of paper. The general shape of the blank is shown in Fig. 1. *a* designates the bottom of the box; *b b*, the flaps, which, when turned up, constitute the short sides of the box; and *c c*, the long sides. Upon each end of the long sides are short corner-flaps *d d*, in which are short slits *e*. The contour of the flaps *d* is as follows: The edge *f* is on a line with the outer or top edge of the long sides *c*, and the outer end extends on a line at right angles thereto for about one-half the depth of the sides *c*, when it runs inward to the slit *e*, leaving the slit from an eighth to a quarter of an inch deep, then from the bottom or near the bottom of the slit *e* to the near corner of the box-bottom *a*, stopping just a little outside of the scoring *g*, as shown. The remaining side of the flap corresponds to the end of the long side *c*, and is connected thereto, the scoring *g* forming the division-line. The flaps *b b* are rectangular, substantially as long as the box is wide, and as wide as the box is deep, and have vertical slits *h h* formed in them, the depth of which slits must be fully equal to the distance from the bottom of the slit *e* to the top edge of the flap *d*, and the distance from the ends of the flaps *b* to the slit *h* must be equal to the distance between the slit *e* and scoring *g*, less the thickness of the stock. The blank is also scored at the junction of the bottom and the several sides, and so far as the particular form of box above described is concerned, the scorings may be of any style in common use, and upon either the outside or inside; but I much prefer the particular scoring hereinafter described.

These boxes are designed to be made by dies and machinery, and packed for storage and transportation in the flat or knock-down form, so as to occupy but little space until they are about to be used.

To set up the box for use, the end flaps *b b* are first bent up at right angles to the bottom. The short flaps *d* are then bent at about right angles to the sides *c c*, and the said sides turned up with the flaps *d* on the outside of the flaps *b*, as shown in Fig. 3; and the corner *n* of flap *d* inserted in the slit *h*, as indicated by broken lines in Fig. 3; then the sides *c c* are brought up at right angles with the bottom, and the flaps interlock at the slits *h e*, as shown in Fig. 4, and the box is ready for use. The cover is the same as the box, only larger, so as to shut over the same. By cutting out a portion of the stock at the corner, so as to form the flaps *d*, as shown, the box is much more conveniently set up for use than it is when made merely slit at the corners, as shown in my former patent before referred to; and by making the diagonal cut stop a little outside of the scoring at the corner, a small portion of the flap closes around the corner at the bottom of the box to make it tight, the same as if no portion of the flap had been removed. It should also be noticed that, this box has no flaps that are of necessity bent over for forming, or that are tucked through openings, and bent back after tucking, in which class of boxes thin paper only can be used; but my box has the flaps slit only upon one of their edges, and is so arranged that in forming no substantial bend of the paper or stock is necessary except at the point of the scorings, and that when the flaps are bent up at said point the stock moves only edgewise in the act of forming, whereby I am enabled to make my box of the very stiffest kind of paper known of which boxes are ever made.

I score my paper box upon the inside and remove a portion of the stock, leaving the scoring *g* in V-shaped form, as shown in Fig. 2. When bent up into form the side takes the position indicated by broken lines in said figure, the two sides of the V-shaped scoring meeting each other on a miter, leaving the outside corners whole and smooth, so that they will not catch upon objects and tear up.

I claim as my invention—

In a knock-down box of the class described, the peculiar shape of the flaps *d*—to wit, having the edge which, when set up, is at the top on a line with the top of the long sides, the end edge at right angles thereto for about half the depth of the sides, the lower edge then turning inward to the slit *e*, and from thence diagonally to just outside the bottom corner, and the fourth side straight and joining the side flaps *c*, substantially as herein shown and described, and for the purpose set forth.

JOSEPH P. BUCKINGHAM.

Witnesses:

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