(No Model.)

T. F. W. SCHMIDT.

PAPER BOX.

No. 377,640. Patented Feb. 7, 1888.

Fig. 1.

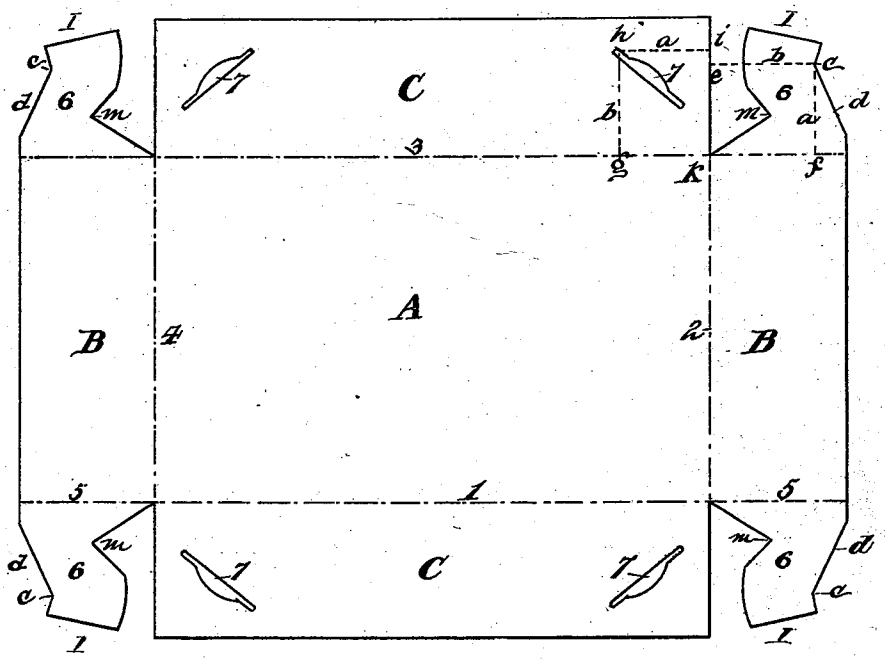


Fig. 4.

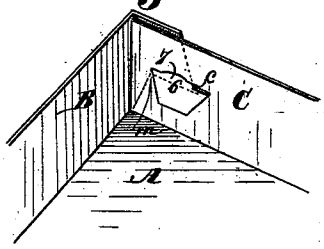


Fig. 2.

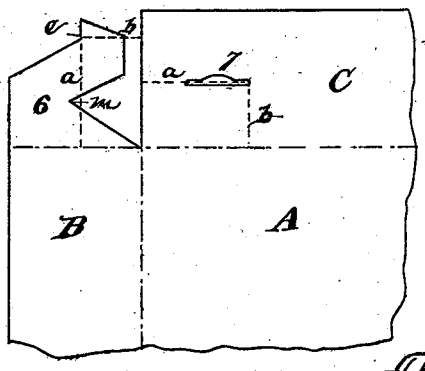
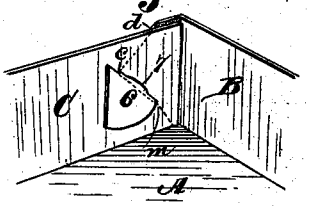


Fig. 3.



Attest
J. Watson Sims
J. C. Wells

Inventor
Theodore F. W. Schmidt
by Wood & Boyd
his Attorneys &c.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

THEODORE F. W. SCHMIDT, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO LAUBACH & IDDINGS, OF SAME PLACE.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 377,640, dated February 7, 1888.

Application filed November 2, 1887. Serial No. 254,106. (No model.)

To all whom it may concern:

Be it known that I, THEODORE F. W. SCHMIDT, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Paper Boxes, of which the following is a specification.

My invention relates to that class of paper boxes which are folded of one piece and fastened at the corners by tongues and grooves.

One of the objects of my invention is to provide a strong locking device which will increase the strength of the boxes and render the fastening less liable to become unloosened, all of which will be more fully explained in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of the blank cut and scored ready for folding. Fig. 2 is a modification of Fig. 1. Fig. 3 is a detail view of one corner of a box made from the blank shown in Fig. 1, and Fig. 4 is a detail view of one corner of a box made from the modified form of blank illustrated in Fig. 2.

A represents the bottom of the box, B B the ends, and C C the sides of the box, which are bent up in the usual manner on the scored line 1 2 3 4 5.

In order to provide a spring-lock, I form a shoulder, *c*, on the outside of the tongue, and cut or bevel off the shoulder on the line *d*. Then to determine the outer point of the slot 7, which receives the tongue 6, I take the distance from *c* to *e*, which is indicated by dotted line *b*, and the distance from *c* to *f*, which is indicated by dotted line *a*. Then on the slot-corner the line *a* has the same length from *h* to *i* as the line *f c*, and the slot-line *b* from *h* to *g* is the same as line from *c* to *e* on the tongue. The two lines *a* and *b* each form right angles, as shown. The slot 7 is made a little longer than the tongue on the line *b*. I represents the incline on the end of the tongue, which bears against the outer end of the slot 7 as the tongue is pressed into the slot. As the paper is yielding and the stock of the tongue cut away at *m*, it will yield enough to allow the tongue to be readily pressed into the slot 7, and will spring back enough to bring the point *c* of the shoulder against the outer corner of the slot 7 and the shoulder outside of it, thus locking it in position, making a very strong box-fastening, and one not liable to become unfastened.

The location of the shoulder *c* and inclination of slot 7 may be varied, as illustrated by the modification shown in Fig. 2. The shoulder *c* is cut at any desired place on the tongue. The lines *a b* are drawn on the tongue side, and the same lines with the angles or limbs reversed are drawn on the slot side to determine the outer edge of the slot, as before explained. In order to determine the angle of the slot, draw a line from *c* to *m*. The angle of the slot should be the same as this line, but reversed in inclination. Thus the line from *c* to *m* in Fig. 2 is nearly vertical. The slot is therefore made nearly horizontal. Hence the shoulder on the tongue side is cut first, and then the position and inclination of the slot are determined from the angles on the tongue side. It is immaterial whether the tongue is on the inside or outside of the box when set up, though for protection of the tongue it is preferable to pass it through the slot from the outside, so that the lock on the end of the tongue will be beneath the box side.

I claim—

A paper box formed from a folded blank, having at each end of two opposite sides the tongues 6, and with angular or inclined extremities I, and having the stock removed to form the notches *m* on one side or edge of the tongue, and the shoulder *c* and bevel *d*, meeting at an angle on the other edge, and the intermediate flaps or sides, C, having the inclined slots 7 near each end, substantially as described.

In testimony whereof I have hereunto set my hand.

THEODORE F. W. SCHMIDT.

Witnesses:

CHAS. W. SNYDER,

O. M. GOTTSCHALL.