(No Model.)

C. L. LOCKWOOD.

KNOCKDOWN BOX.

No. 382,312. Patented May 8, 1888.

Fig. 1.

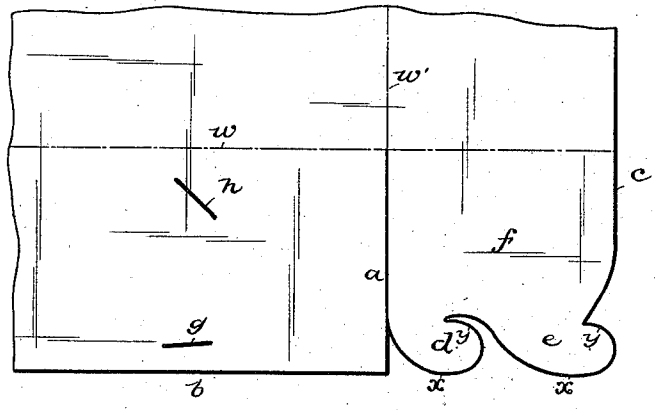
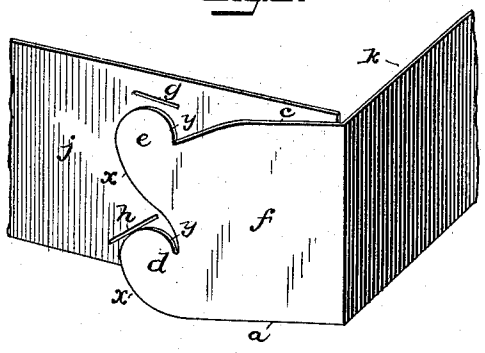


Fig. 2.



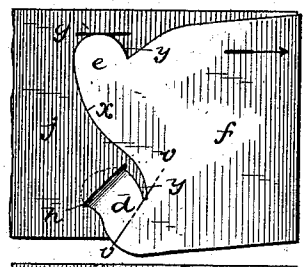


Fig. 3.

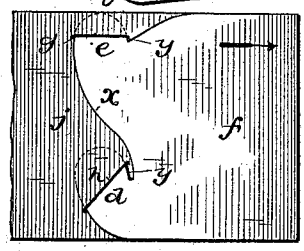
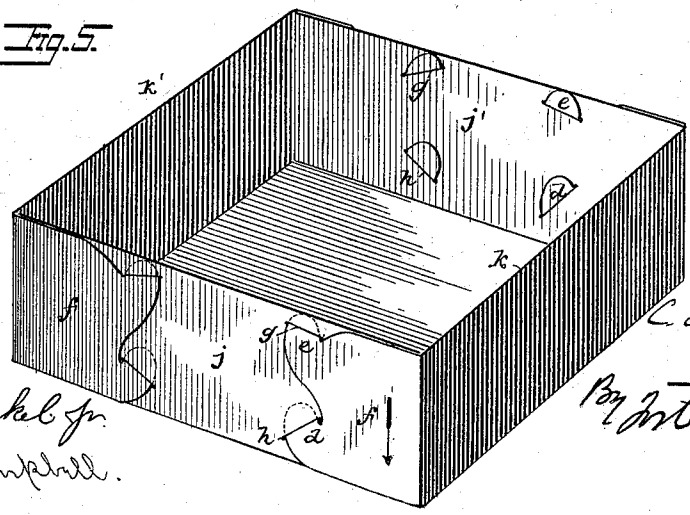


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES L. LOCKWOOD, OF PHILADELPHIA, PENNSYLVANIA.

KNOCKDOWN BOX.

SPECIFICATION forming part of Letters Patent No. 382,312, dated May 8, 1888.

Application filed March 3, 1888. Serial No. 266,088. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. LOCKWOOD, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Knockdown Boxes, of which the following is a specification.

My invention relates to that class of boxes technically known as "knockdown boxes;" and it consists in constructing the said boxes from flaps having slots and tongues, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is an end view of the blank from which my improved box is made. Fig. 2 shows one corner with the parts in position to interlock the sides together prior to introducing the tongues into the slots. Fig. 3 shows the positions of the parts when the tongues are partially introduced into the slots. Fig. 4 shows the positions of the parts when the tongues are wholly introduced into the slots. Fig. 5 is a perspective view of the box with the sides locked together.

A box-blank is cut from an oblong sheet of board, and each corner is formed to the shape illustrated in Fig. 1, where is shown a slit, *a*, at right angles to one of the edges *b* of the box, extending into the blank a distance equal to the depth of the side and parallel to the adjacent edge *c* at a distance therefrom also equal to the depth of the side of the box. The loose piece *f* between the slit *a* and the edge *c* is cut to form two tongues, *d e*, each having a curved edge, *x*, and an inner shoulder, *y*, both of said tongues projecting outward toward the edge *c* parallel to the slit *a*. On the opposite side of the slit *a*, and between the edge *b* and a line, *w*, parallel thereto, which is scored or creased to divide the side from the bottom of the box, are formed two slots, *g h*, the former nearly parallel or parallel to the edge *b* and the other at an angle thereto. After the blank is thus formed with a flap and pair of tongues and two slots adjacent to each corner, the same is bent upon the scored lines *w*, and also upon scored lines *w'* parallel to the edge *c*, thereby turning up the edges of the blank to form the sides *j j' k k'*.

The flaps *f* at the ends of the side portions *k k'* are brought to the outsides of the side portions *j j'*, as shown in Fig. 2, and the flap *f* at each corner is then pressed downward to bring the end of the tongue *e* into position to enter the slot *g*, and the tongue *d* is bent inward so as to enter the slot *h*, as shown in Fig. 3, after which the flap is pressed upward to carry the tongues fully into the slots to the position shown in Fig. 4, when the sides of the box will be locked together at right angles to the bottom *n*.

By arranging the upper slot parallel to the adjacent edge of the side portion the edge or shoulder *y* of the tongue *e* is brought at right angles to the said slot, and any pressure against the side *k* of the box in the direction of the arrow, Fig. 4, will serve only to carry the said shoulder *y* firmly into the end of the slot without any tendency to unlock the flap *f*.

The tongue *d* serves to prevent the flap *f* from being readily moved downward in the direction of the arrow, Fig. 5, and as this tongue *d* is at the corner of the flap it can readily be bent upon the line *v v*, Fig. 3, so as to enter readily the inclined slot *h*, while the shoulder *y* of the tongue *e* will take its bearing against the end of the slot *h* and aid in locking the flap so as to resist any pressure on the side *k* in the direction of the arrow, Fig. 4.

If the slot *h* were parallel to the slot *g*, the lower tongue would not serve in any way to lock the upper one, and if the slot *h* were placed at a higher point to receive a tongue above the corner of the flap, or at a lower point so as to receive a downwardly-projecting tongue, the latter would have to be bent to such an extent as to endanger the breaking of the material. By arranging the slot *h* at an angle, as described, and by placing the tongue *d*, projecting upward, at the extreme corner of the flap, I am enabled to bend it so as to enter the lower slot without danger of breaking the material, and it serves very effectively to secure the upper tongue in place under ordinary pressures tending to throw it out.

I claim—

1. A blank for knockdown boxes, creased upon the lines *w w'* parallel to the edges, slotted from opposite sides along the lines *w'* to the lines *w* to form flaps *f*, with outwardly-projecting tongues *e d* at the end of each flap,

and with slots *g h* adjacent to each slit, the slot *g* being parallel to the outer edge and the slot *h* at an angle thereto, substantially as set forth.

2. A knockdown paper box having in opposite sides slots *g* adjacent and parallel to the edge of such sides, and slots *h*, each at an angle to the adjacent slot *g*, and with terminal flaps *f* on the other sides of the box, each flap having at the outer ends two upwardly-projecting tongues, *e d*, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES L. LOCKWOOD.

Witnesses:

RICHD. H. REILLY,

F. L. FREEMAN.