No. 648,385. Patented May 1, 1900.

# J. D. BURNS.

## LOCK CORNER FOR BOXES.

(Application filed Jan. 17, 1900.)

(No Model.)

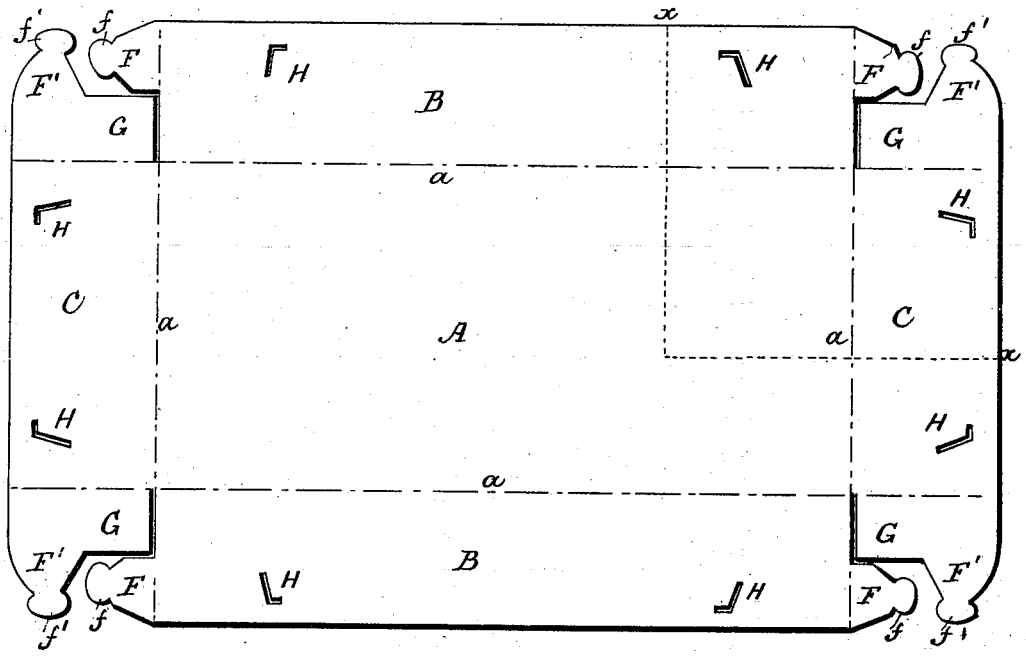


Fig. 1.

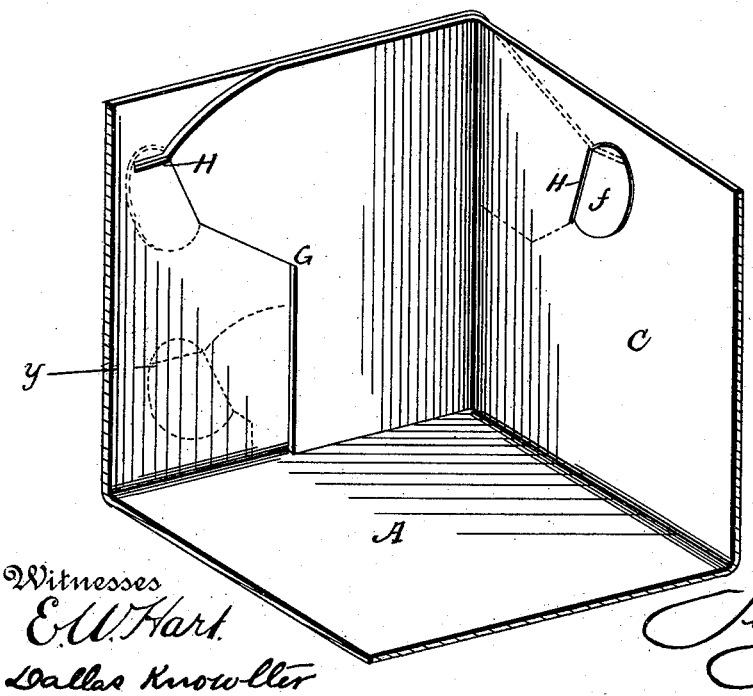


Fig. 2.

Witnesses
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# UNITED STATES PATENT OFFICE

JEREMIAH D. BURNS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## LOCK-CORNER FOR BOXES.

SPECIFICATION forming part of Letters Patent No. 648,385, dated May 1, 1900.

Application filed January 17, 1900. Serial No. 1,712. (No model.)

*To all whom it may concern:*

Be it known that I, JEREMIAH D. BURNS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Lock-Corners for Boxes; and I do hereby 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.

This invention relates to cardboard and like boxes or cases, and has for its object to provide a folding box that has arranged at its adjacent corners overlapping and interlocking flaps and retaining devices therefor that admit of increasing the strength of the box at each corner by providing a double thickness of sheet material, as well as preventing the accidental displacement or dislocation of the locking parts when once in place.

The invention consists, essentially, in combination, with a box-blank defined by lines, of ultimate folding that allows of the formation of radiating wings or members, which are adapted to fold up at right angles to provide a bottom, and opposite sides and ends of transversely-folded corner-flaps extending from each of said wings to provide at adjacent corners of said box overlapping, interlocking, and supporting devices.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a box-blank constructed in accordance with my invention. Fig. 2 is a perspective view of a detail or corner of said box when folded, taken on lines *x x* of Fig. 1.

Like letters of reference indicate like parts in both figures.

A represents a substantially-rectangular blank which is scored, as indicated at *a a*, to provide the lines of folding, which enables the formation of the sides and ends, respectively, by bending the same upward at right angles to form in connection with the bottom a regular-shaped box.

The side portions or members B B are each provided at their respective ends with flaps F, that are adapted for transverse folding and which are cut in a suitable contour to provide locking tongues or extensions *f*. The end wings or members C C are likewise provided with transversely-folding flaps F′ and which are provided at their extreme top corners with tongues *f*′, but the material of said latter flaps is so cut as to also provide an internal extension G, the function of which is all important in that when folded and in position, as shown in Fig. 2, it forms an upright or supporting extension member that obtains a bearing on the bottom of the box, thereby preventing the inward swinging or tipping of the member C out of its true vertical plane. It is evident that by thus supporting the end member C there is provided at each corner or end thereof a solid corner structure that not only admits of the folding of the adjacent overlapping flap F to provide a double thickness of interlocked parts at each corner, but there is also provided a means for the retaining of the tongues *f* and *f*′ rigidly within their respective slits H H when once seated therein. Without such a coacting supporting means any inward swinging or buckling of the members B C would cause a downwardly-yielding bearing or seating for the locking-tongues that would readily allow of their dislocation from the retaining slits or slots H. It will also be observed that the contiguous flap portions of the adjacent side and end members are so produced in the cutting away of the material as to lie wholly within the limits of the blank material defined by the outer edges of the side and end members, respectively, and by reason of such a plan of cutting their contours there results a great economy in material. I also provide the end portions of each of the radiating wings with receiving slits or slots H, that are preferably made V-shaped and which are adapted to receive the tongue projections, respectively, of the overlapping flaps of the contiguous wings or members. By this means the end flaps F and F′ of the adjacent corners of the wings are adapted to overlap and engage with the respective slits to form an interlocking connection, while the internal upright extension G of the flaps F′ form by an end bearing on the bottom of the box a means for positively retaining the tongues interlocked in normal position, and the utility of such a fastening is materially increased, as the adjacent corners are thereby virtually connected by a triple fastening.

As shown in dotted lines in Fig. 2, the ex-

tension G may also be provided with a tongue projection, and when thus provided is adapted to enter a slit (shown at *y*) to provide, in conjunction with the other tongue-fastenings, a triple fastening without departing from my invention; but in ordinary practice this modification will be found unnecessary, because the bearing of the extension G on the bottom of the box will be found sufficient to hold the interlocked tongue-fastenings in proper position and will effectually prevent any chance of accidental displacement when they are in their normal position of fastening.

Having described my invention, what I desire to claim as new and useful is—

1. As an article of manufacture a box-blank defined by lines of ultimate folding to provide a bottom and folding side and end members or wings, the side members thereof having at their ends transversely-folding extensions that are provided with overlapping engaging tongues, while the end members are provided with extensions having like overlapping tongues, and an internal supporting extension, that obtains a bearing on the bottom of the box when in normal position; and receiving-slits for the reception of the respective tongues located on the respective end portions of each member, as and for the purpose set forth.

2. A duplex fastening provided with extensions adapted to overlap, and a supporting-brace, the whole made from and constituting a substantially-rectangular blank.

3. A box-blank formed with a series of radiating wings that are provided, respectively at each end portion with a tongue-receiving slot, and a transversely-folding flap extension having a tongue extension that is adapted to overlap at the adjacent corners to form an interlocking means, and an internal supporting extension depending from one of each adjacent pair of overlapping flaps, as and for the purpose set forth.

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

JEREMIAH D. BURNS.

Witnesses:
E. T. FOX,
LOUIS E. REED.