

(No Model.)

F. R. DUCK.  
PAPER BOX.

No. 266,445.

Patented Oct. 24, 1882.

Fig. 1.

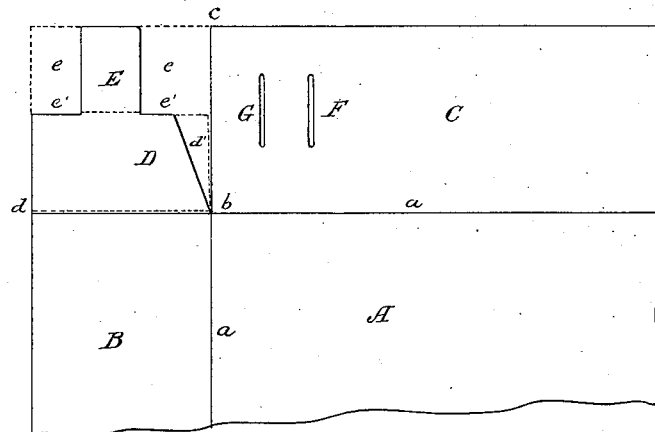


Fig. 2.

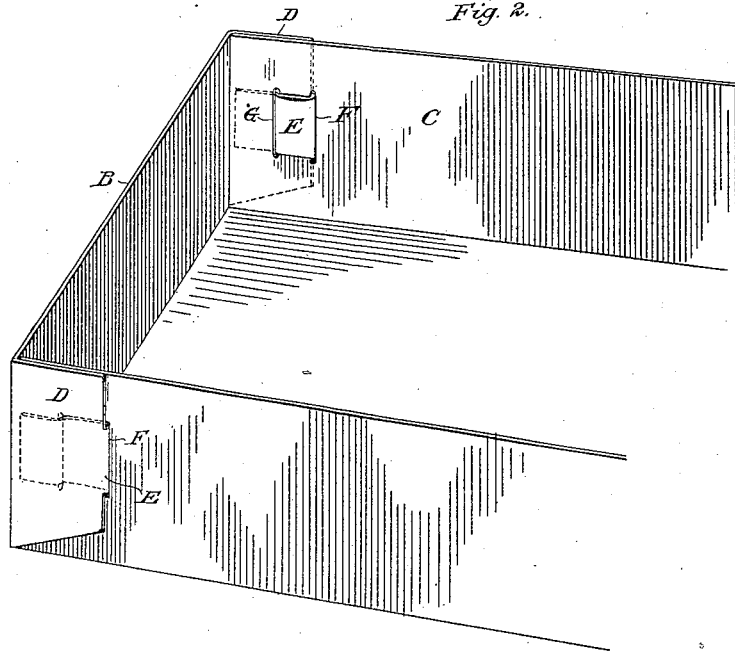
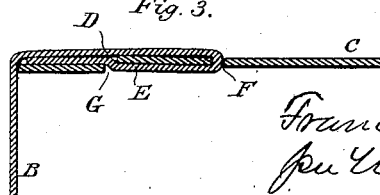


Fig. 3.



Witnesses:

C. C. Poole  
Cyrus Kehr.

Inventor:

Francis R. Duck  
per W. E. Dutton  
Attorney

# UNITED STATES PATENT OFFICE.

FRANCIS R. DUCK, OF CHICAGO, ILLINOIS.

## PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 266,445, dated October 24, 1882.

Application filed September 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS R. DUCK, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of boxes and covers made from paper or other substance in sheet form, and in which the side or sides and ends are formed of the same sheet with the bottom or top, and in which the adjacent sides are locked together at the corners to retain them in position when the box is formed. The object of this general construction in boxes is primarily to permit the boxes to be shipped in "knockdown" form, or with the sides lying flat or in the same plane with the bottom. It is therefore necessary that the interlocking devices by which the sides are joined and held shall form a connection easily made by the purchaser, and it is also desirable that the connection made thereby shall be strong and permanent. Most of the "locked-corner" boxes heretofore made are defective in one or both of these requisites; and it is the object of this invention to improve this class of boxes in these particulars.

To this end the invention consists in the features of construction hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a fragmentary plan view of the blank or sheet from which the box is to be made, showing the form of cut made at the corner of the sheet to allow the side and end to be joined according to my invention. Fig. 2 is a perspective view of the box made from the blank of Fig. 1, and having its sides and ends joined as proposed in my invention. Fig. 3 is a horizontal section through the joined parts.

A is the sheet, usually of paper, creased in the lines *a a*, and severed or cut through in the line *b c* to allow the parts B and C to be upwardly folded to form an end and side of the box. The part B is also scored or creased

in the line *b d* to allow the corner-piece D to be bent around outside and against the part C when these two parts are brought into vertical position. As a means of fastening the parts B and C together to form the end and side of the box, the corner-piece D, continuous with B, is cut away at *ee* to leave a tongue, E, and the adjacent part C is provided with a vertical slot, F. The tongue E is thrust inwardly through the slot F, and its end is then returned or folded back toward the part B, to which it belongs, and is fastened down against the inner face of the part C by any suitable means. For the purpose of securing the end of the tongue in this backwardly-folded position an eyelet, a rivet, or a clinched tack may be employed, being made to pass through the three thicknesses of material produced by the overlapping and folding of the parts, as described; but I prefer to generally fasten the end of the tongue in its backwardly folded position by providing a second vertical slot, G, between the slot F and the adjacent end of the side C in position to allow the end of the tongue to be tucked through the same, as shown in Figs. 2 and 3. The tongue thus returned or bent backward and secured, after being passed through the slot F, forms a hook of great strength, and not calculated to be detached or loosened by handling of the box in use. In the case of deep boxes two or more tongues, E, and corresponding slots may be provided.

The part or flap D should preferably be left of the full width of the box-side as far back as the slot G, (or only beveled at *d'*), as shown in Figs. 1 and 2, in order to present shoulders *e' e'* at the base of the tongue, which act as supports to prevent the latter from being forced into the slot F farther than is necessary to bring the end of the side C against the inner surface of the adjacent side or end B. In this construction the end of the tongue can never be pushed out of the slot G by the collapse of the box, and the connection is rendered firmer and more permanent. In order that the fold in the tongue may be made at the proper point to draw the end firmly against the side of the box, said tongue may be advantageously creased in the transverse dotted line near its base. (Shown in Fig. 1.)

The invention may of course be applied to the covers as well as the bodies of boxes.

I claim as my invention—

1. In a box having its sides of the same piece with the bottom, one of said sides provided with a slot, F, and the adjacent side provided with a tongue, E, said tongue being inserted through the slot and returned and secured, substantially as and for the purposes set forth.

2. In a box having its sides of the same piece with the bottom, one of said sides provided with the slots F and G, and the adjacent side provided with a tongue, E, said tongue being inserted through the slot F and returned and tucked through the slot G, substantially as described, and for the purposes set forth.

3. In a folded box having a tongue, E, upon one of its sides inserted through a slot in the adjacent side and returned and secured, as set

forth, the flap D, provided with a shoulder or shoulders, c, arranged to bear against the ends of the slot when the side C bears with its end against the inner surface of the side B, substantially as described.

4. The blank shown, having the corners cut to form the flap D and tongue E, and provided with the slots F and G, substantially as described, and for the purposes set forth.

5. The blank shown, having the tongue E and slot F, said tongue being transversely scored at a point where it is to be backwardly folded after being inserted through the slot, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

FRANCIS R. DUCK.

Witnesses:

M. E. DAYTON,

PETER J. ELLERT.