

3 Sheets—Sheet 1.

No. 575,461.

Patented Jan. 19, 1897.

Fig. 1.

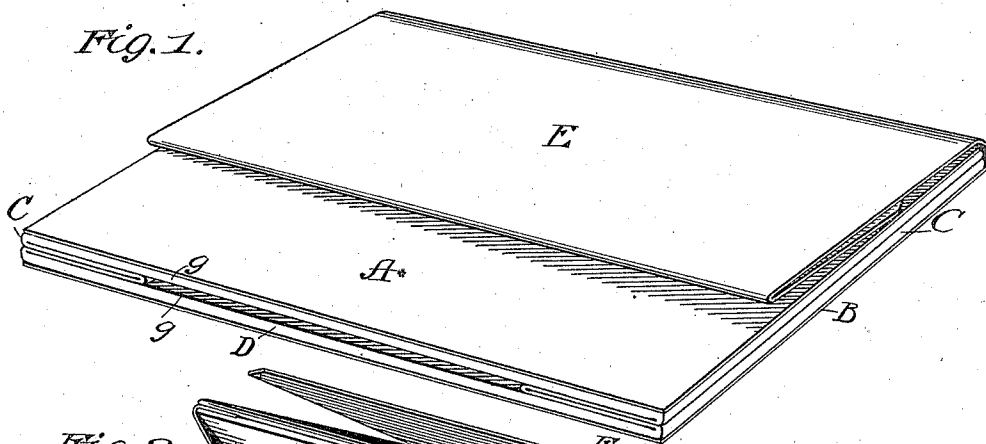


Fig. 2

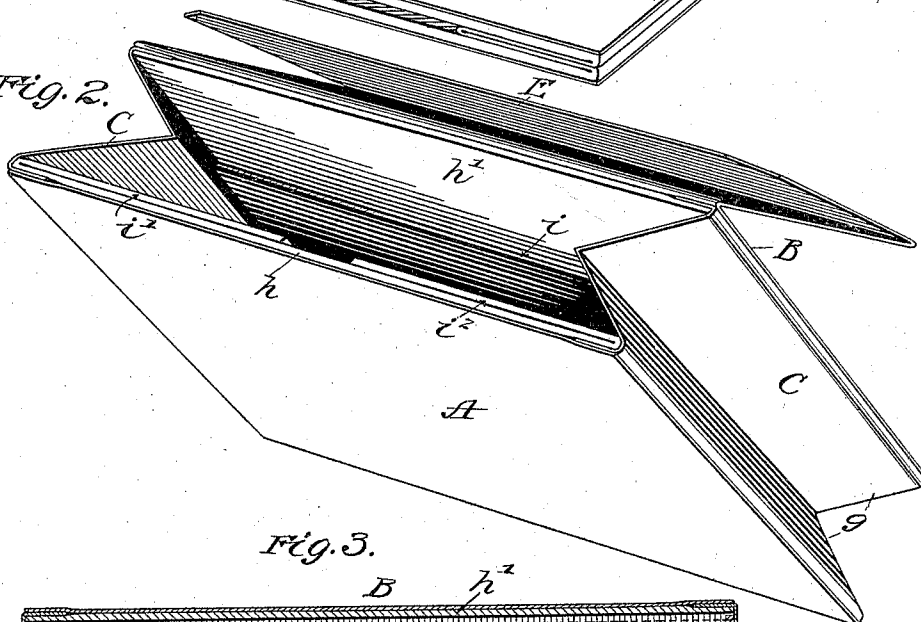
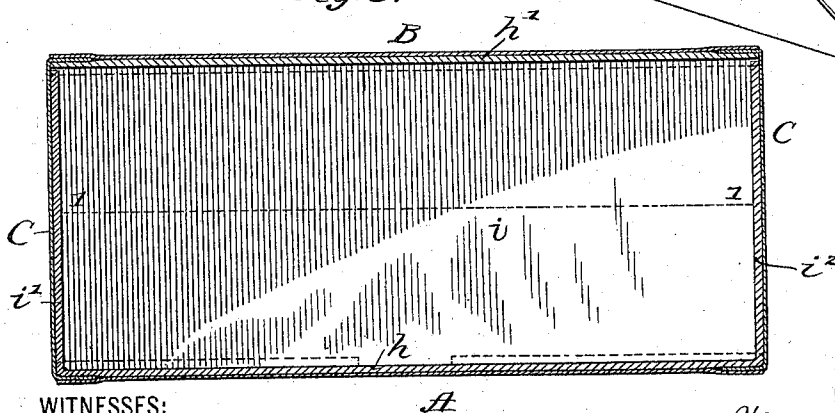


Fig. 3.



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(No Model.)

3 Sheets—Sheet 2.

W. A. COOKE, Jr.
PAPER BOX.

No. 575,461.

Patented Jan. 19, 1897.

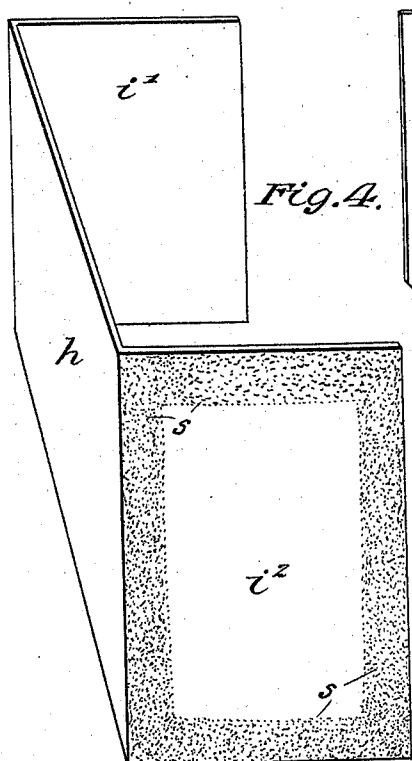


Fig. 4.

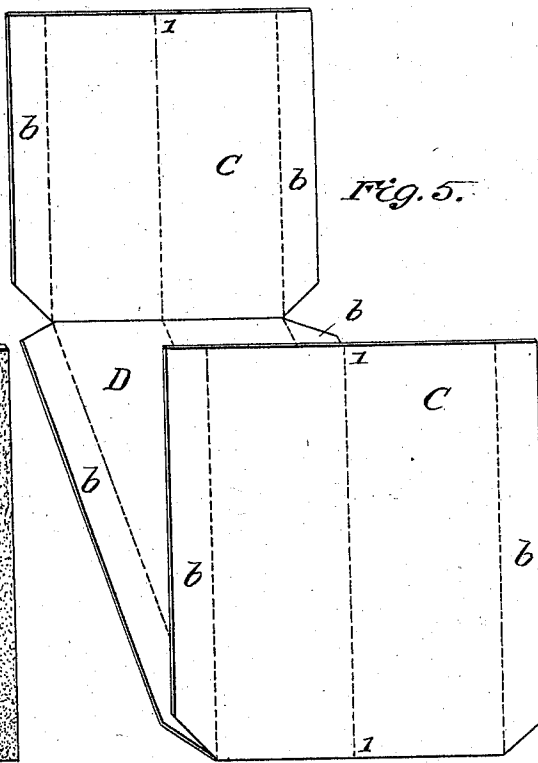


Fig. 5.

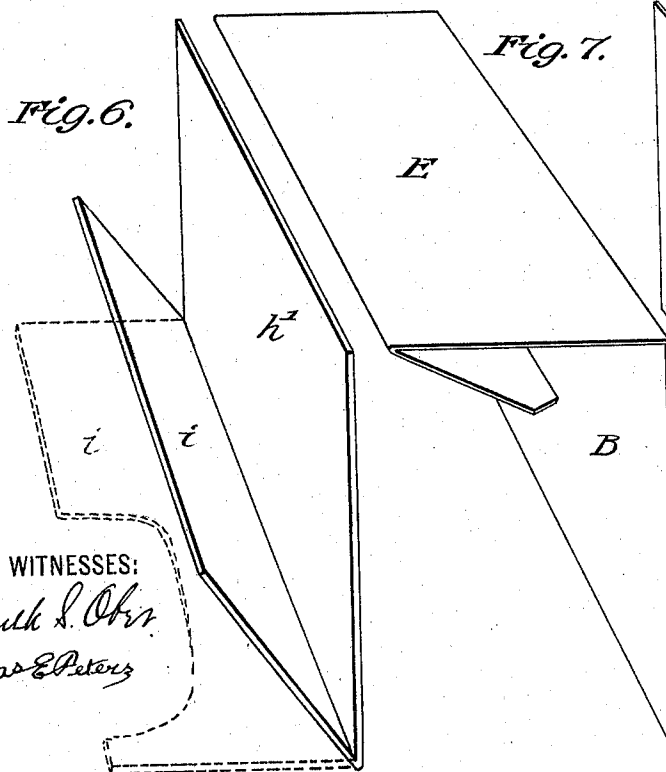


Fig. 6.

Fig. 7.

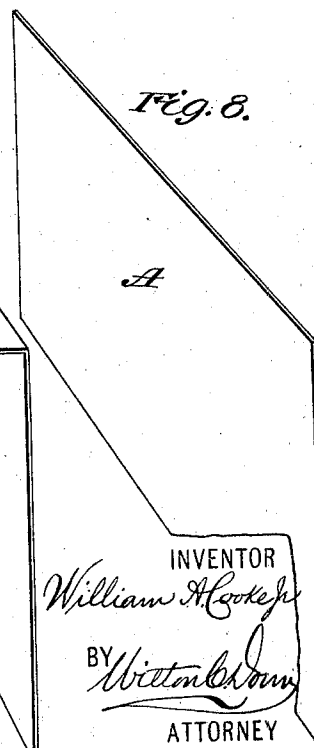


Fig. 8.

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(No Model.)

3 Sheets—Sheet 3.

W. A. COOKE, Jr.
PAPER BOX.

No. 575,461.

Patented Jan. 19, 1897.

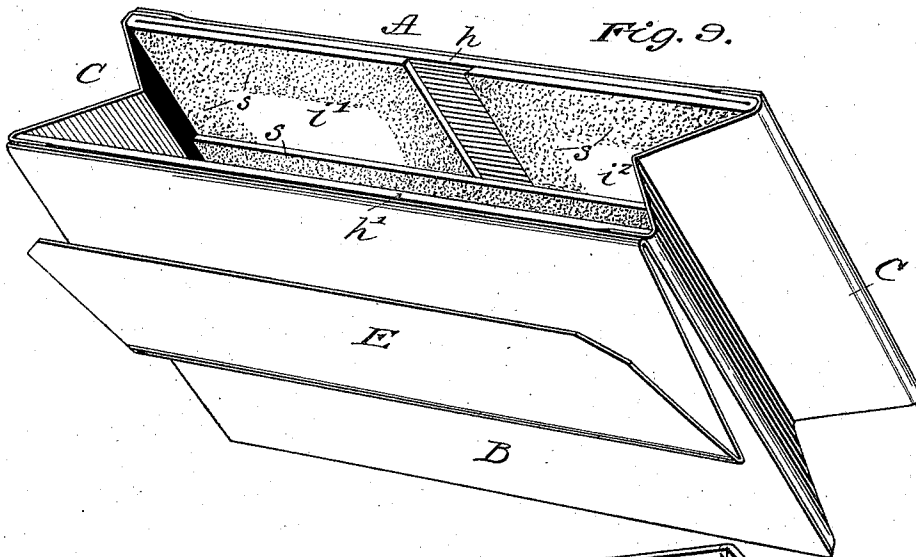


Fig. 10.

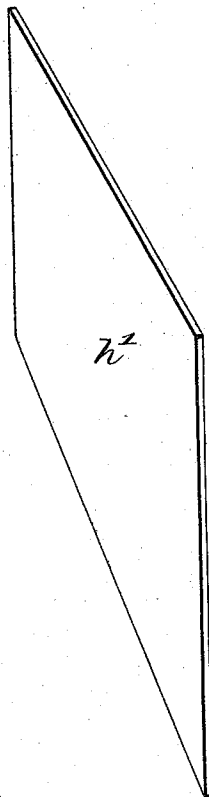
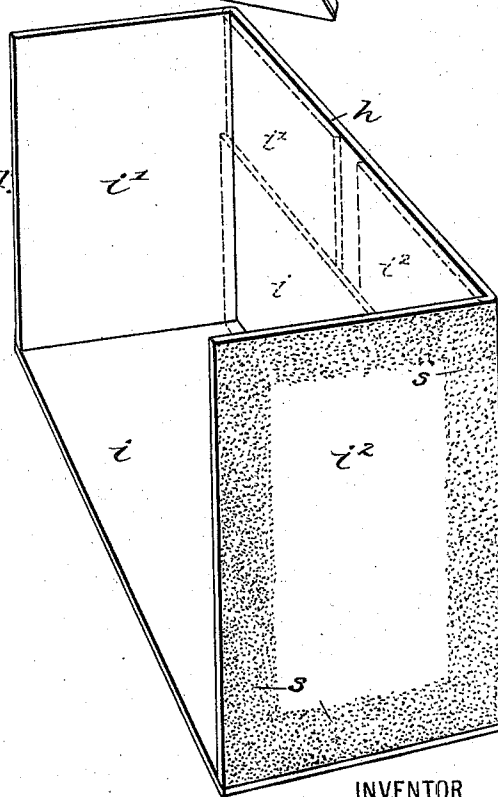


Fig. 11.



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UNITED STATES PATENT OFFICE.

WILLIAM A. COOKE, JR., OF BROOKLYN, NEW YORK.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 575,461, dated January 19, 1897.

Application filed November 18, 1895. Serial No. 569,305. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. COOKE, JR., a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Paper 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.

My invention relates to folding boxes made of paper or other flexible material; and it has for its object to provide a box which can be collapsed for storage, transportation, &c., but when needed for use can be instantly expanded and the component parts secured so as to form a "solid" or permanently-made-up box.

To this end the invention consists in a box constructed with flexible creased ends and bottom and lined with stiff material at the front and back, and having the lining formed with integral foldable extensions which are adapted to be adhesively secured to the ends and bottom of the box when expanded, and thereby form a solid or permanently-made-up box.

In the accompanying drawings, Figure 1 represents the box folded or collapsed; Fig. 2, a perspective view of the box partly expanded, showing the inside thereof; Fig. 3, a longitudinal horizontal sectional view of the box when made up; Figs. 4 to 8, the component parts of the box illustrated by Figs. 1 to 3. Fig. 9 represents in perspective another construction of the expansible parts of the box; Fig. 10, the stiff front plate or lining, and Fig. 11 the stiff back, ends, and bottom.

Referring to the drawings, A designates the front of the box; B, the back; C C, the ends; D, the bottom, and E the closing-flap, which may, however, be omitted and the box left open, as for some purposes, as, for example, when the box is to form a case for the reception of another article, a flap is unnecessary.

The ends and bottom are preferably integral, and at their longitudinal middle line are creased, as at 1, so that they will form gusset-folds, as in Fig. 2, (the ends only being visible,) to facilitate the collapsing of the box. The bottom and ends are provided with edge flaps *b b*, &c., in the usual manner, which are turned in and the front and back glued there-

to, thus forming the box so far as its exterior walls are concerned. These parts of the box may be made of comparatively light material capable of receiving any suitable ornamentation.

Inside the box linings *h h'* are respectively glued to the front and back of the box. These linings are of a heavier and less flexible material, and they are provided with integral extensions *i i'*, which are not attached to the box, but by means of creased lines they are adapted to be turned down flat against the linings, of which they form part, or extended out at right angles thereto, and thereby made to form the bottom and end linings of the box.

In the box and its component parts (illustrated in Figs. 1 to 8, inclusive) the extension *i* is integral with the back lining *h'*, and *i'* with the front lining *h*. The surfaces of the extensions, which when extended come in contact with the ends and bottom of the box, are preferably coated so far as necessary with a soluble adhesive (indicated on one of the end extensions, Fig. 4, only) by stippling *s*; but it is to be understood that it is applied in the same manner to the other end extension and bottom extension in the same manner and for the same purpose.

The box being constructed as above described is adapted to be collapsed and take the flat form represented in Fig. 1, when it can be packed into very little space or expanded and made practically into a solid box, as represented in section Fig. 3. When the box is collapsed, the bottom extension *i* is turned up against the back lining *h'*, the end extensions *i' i''* are folded against the front lining *h*, and the gusset-folds of the ends and bottom are pressed in, as indicated in Fig. 2, whereupon the front and back of the box can be pressed close together and the closing-flap folded, as in Fig. 1. To "set up" the box the gusset-folds are first pressed out flat. Then the bottom extension-lining *i*, first being properly moistened, is turned down flat and pressed against the bottom of the box so as to make it adhere thereto. Then the end extension-linings *i' i''*, also properly moistened, which are of the thickness of the material less in depth and width than the box, are turned out against the ends of the box and pressed in contact with the same until they adhere.

The box is now set up and it is as firm and rigid as any solid box.

The construction represented by Figs. 9, 10, and 11 differs from that above described in having all the extension parts i i' i^2 , which make the bottom and end linings when the box is set up, formed integral with the front lining h , as shown in Fig. 11, the back lining h' being merely a flat plate. The process of converting the box is substantially the same, but the ends and bottom extension linings are all folded against the front lining when the box is collapsed, as shown in Fig. 9 and indicated by broken lines in Fig. 11.

I claim—

1. In paper boxes a flexible exterior case having the bottom and ends creased to adapt them to form gusset-folds and a stiff lining at the front and back and bottom and ends—the back and front linings adhesively secured to the case, and the ends and bottom left free and adapted to be folded to permit the box to be collapsed or extended against the ends and bottom of the case to set the box up, substantially as specified.

2. In paper boxes a flexible exterior case having the bottom and ends creased to adapt them to form gusset-folds and a stiff lining at the front and back, and bottom and ends, the front and back linings adhesively secured to the case, and the ends and bottom left free and their exterior surfaces coated with an adhesive substance, the bottom and ends being adapted to be folded to permit the box to be

collapsed or extended against the ends and bottom of the case and secured thereto to set the box up, substantially as specified.

3. In a paper box the combination of an exterior case and a stiff lining therefor comprising front and back parts in separate pieces, and the bottom and end parts forming integral parts of the back lining—the front edge of the bottom lining bearing against the front lining to hold the same open at the bottom, and the front and bottom edges of the ends bearing against both the bottom and front linings, whereby the box is prevented from collapsing, and a solid box formed, substantially as specified.

4. In paper boxes a flexible exterior case A, B, C, having in the ends and bottom a creased line 1 1 to adapt them to form a gusset-fold g , and a stiff lining composed of front h , back h' bottom i and ends i' i^2 —the back and front linings h h' adhesively secured to the case, and the ends i' i^2 and bottom i left free and adapted to be folded to permit the box to be collapsed or extended against the ends and bottom of the case to set the box up, substantially as specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

WILLIAM A. COOKE, JR.

Witnesses:

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CHAS. E. PETERS.