(No Model.) 2 Sheets—Sheet 1.

A. G. WILSON.

PAPER BOX.

No. 303,778. Patented Aug. 19, 1884.

Fig. 1.

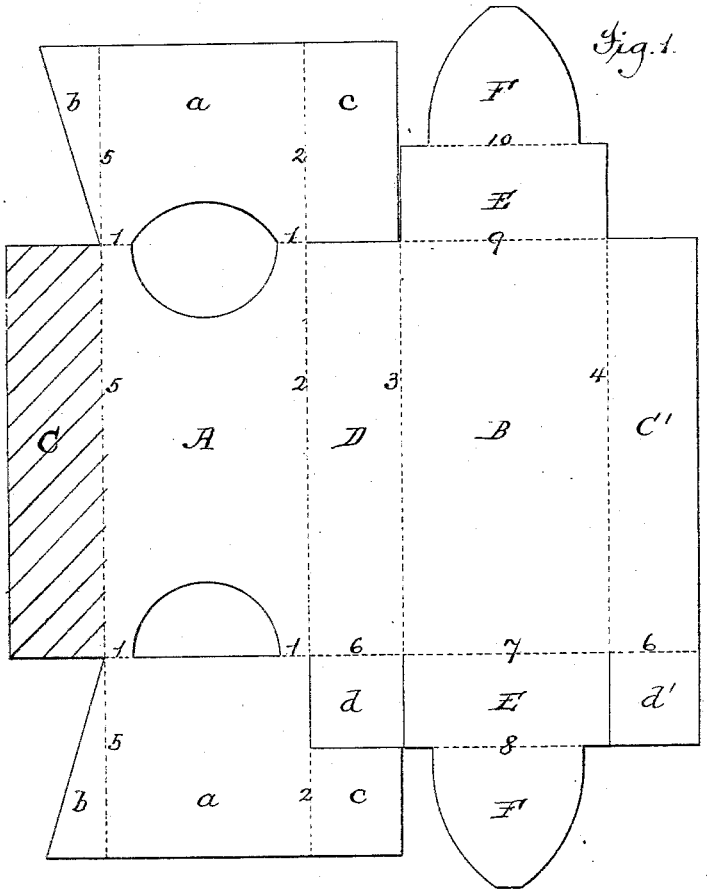


Fig. 2

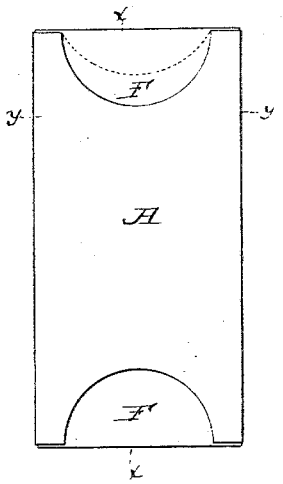


Fig. 3

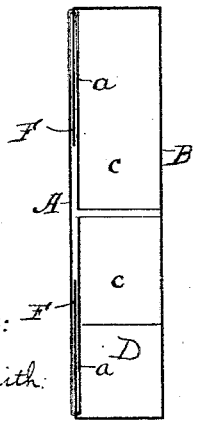


Fig. 5

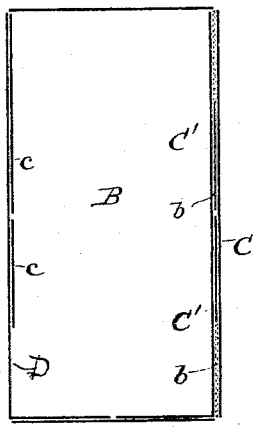
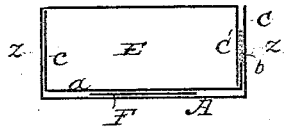


Fig. 4



Attest:
R. H. Smith.
A. B. Barnes.

Inventor:
Arthur G. Wilson
By atty.
Jacob Felbel.

(No Model.) 2 Sheets—Sheet 2.

A. G. WILSON.

PAPER BOX.

No. 303,778. Patented Aug. 19, 1884.

Fig. 6

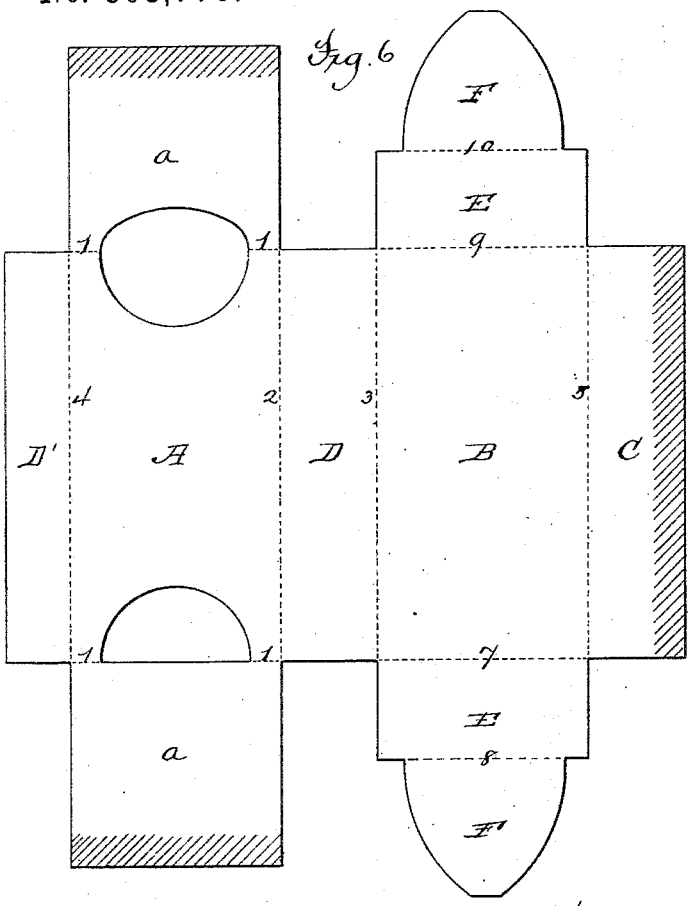


Fig. 7.

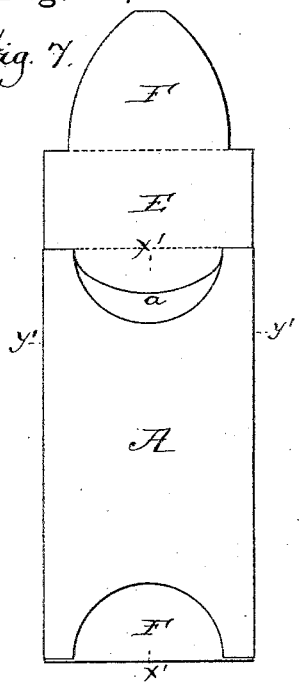


Fig 8

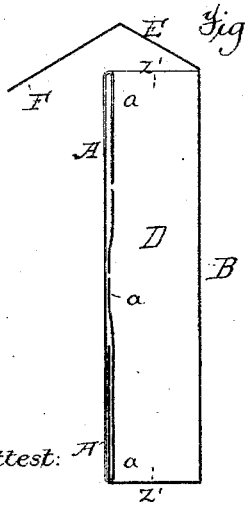


Fig. 10

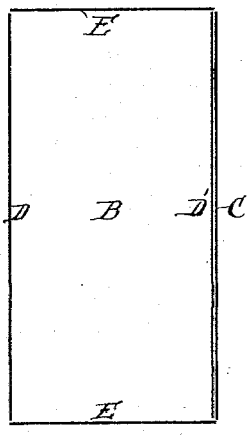
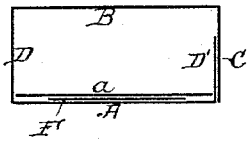


Fig. 9



Attest:
R. H. Smith.
D. P. Barnes.

Inventor:
Arthur G. Wilson
By atty.
Jacob Felbel

UNITED STATES PATENT OFFICE.

ARTHUR G. WILSON, OF NEW YORK, N. Y.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 303,778, dated August 19, 1884.

Application filed May 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR G. WILSON, of New York city, in the county of New York and State of New York, 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, making part of this specification.

My invention relates to certain new and useful improvements in paper boxes of the kind employing closing tucks or flaps; and one of the main objects of my invention is the production of a box of a construction such that the tuck, when performing its function of keeping the box closed, shall be located away from the interior thereof and separated from the contents of the box, so as not to injure or crowd the same or be itself affected by what the box may contain; and to this main end and object my invention consists in certain features of structure which will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of one form of blank cut and creased and adapted to be folded up into a box embodying my invention. Fig. 2 is a back elevation of a box made up from a blank such as seen at Fig. 1. Fig. 3 is a vertical section taken on the line *x x* of Fig. 2, and looking toward the left. Fig. 4 is a transverse section taken on the line *y y* of Fig. 2, and Fig. 5 is a vertical transverse section of the box shown at Fig. 2, taken on a plane represented by the line *z z* of Fig. 4. Fig. 6 is a plan view of another form of blank prepared by cutting and creasing to be folded up into a box embodying my invention. Fig. 7 is a back elevation of a box made up from the blank last referred to, but showing one end left open. Fig. 8 is a longitudinal vertical section of the same at the line *x' x'* of Fig. 7, with one end still unclosed, but showing the tuck and end flap in slightly different positions from those represented in the last-named figure. Fig. 9 is a horizontal section taken at the line *y' y'* of Fig. 7, but after having closed the box; and Fig. 10 is a vertical cross-section of the closed box, taken at the line *z' z'*, Fig. 8.

In all the views the same parts will be found designated by the same letters of reference.

Referring now more particularly to Sheet 1 of the drawings, and to the blank shown at Fig. 1, it will be understood that the dotted lines represent those portions of the blank which are creased and the full lines those parts which are severed, and that the portions A and B, when folded up, will make or produce the two main or broader sides of the box the parts C C' and D the narrower sides of the box, E E the end pieces, and F F the tucks or tongues. Each end of the side piece A is provided with an extension, *a*, which is to be folded over and down onto the part A and form an interior wall or partition to the box, between which and the part A the tuck F is to be inserted. In order to keep the flaps *a a* in proper position—about parallel with the side A of the box—they are provided on each side with wings or ear-pieces *b c*, the former of which lie between the narrower side pieces C C' and the latter against the side piece D of the completed box. To provide for the insertion of the tuck between the double sides (so to speak) A *a*, either an incision or cut-out must be made at about the line on which the part *a* is folded, and either one of the two forms of cut-out shown are deemed preferable to a mere incision at the junction of the parts A *a*, though the latter may be used.

The cut-out or opening shown at the upper portion of Fig. 1 comprises a segmental cut-out or removal of the stock of the extension *a* and an opening in or removal of the stock of the side A semicircular in form or outline. The advantage of this form of opening is twofold: first, to make portions of the inner ply, *a*, of the double side of the box extend above portions of the outer ply, A, so as to facilitate the entering of the tongue in closing the box; and, second, to produce a "low cut" at one of the broad sides of the box, so as to enable the contents of the box (especially if it be cigarettes) to be conveniently grasped by the fingers and extracted or withdrawn. The cut-out or opening illustrated at the lower end of the blank is made by removing a portion of

the side A only, and of course, instead of being semicircular in form, as shown, may (as may also the upper cut-out) be of other shape. The opening shown at the lower end of the blank is introduced merely as a modification, and embodies only the first-mentioned of the two advantages gained by the form of cut-out shown in the upper potion of the figure.

The ear-pieces *b b* are preferably cut of triangular shape, and of less width than the side flap, C, so as to admit of a larger pasting-surface and a better union between the sides C and C'.

Adjoining the lower ends of the side pieces D and C' are flaps *d d'*, which are to be folded inward across the box-opening, and to be held in place underneath the end piece, E; but these flaps *d d'* may, if desired, be wholly dispensed with, as they are at the other (upper) end of the blank, in which event it would be desirable to use the stock now consumed by *d* to prolong the ear-piece *c* and make it a duplicate of the one at the other end of the blank.

I shall now proceed to describe the operations of folding, pasting, and closing the box made from the blank shown at Fig. 1. Fold on the hinged lines 1 1 the parts *a a*, with their ear-pieces inward, over and down onto the side pieces A, C, and B; fold on the line 2, so as to bring the wings *c c* and side D, together with the flap *d*, at right angles to the part A; fold on the line 3, so as to bring the parts B, &c., parallel with the part A; fold on the line 4 the parts C' *d'* at right angles to the parts B and E, and bring the free edge of C' onto the line 5, and then fold on the line 5 the pasted flap C and the triangular wings *b b* up against the side piece C', and secure these parts together. In order to close the lower end of the tube thus formed, turn inwardly at right angles to the narrower sides of the tube and on the lines 6 6 the ear pieces or flaps *d d*. Then turn down on the line 7 the end piece, E, and about simultaneously therewith turn on the line 8 the tuck F and pass its point through the semicircular opening down between the parts A *a*. A box thus formed, after receiving its intended contents, is closed by folding the end piece, E, on the line 9 down across the mouth of the box, and by folding at about the same time on the line 10 and passing the leading end of the tuck or tongue F down through the cut-out described and between the double side of the box A *a*. It will be observed that in this form of blank the side piece C is the only part which it is necessary to paste or gum, and that the interior side pieces or walls, *a a*, are held up properly in position against dropping on the hinged lines 1 1 by means of the side wings or ears, *b c*.

In the modification shown at Fig. 6 it will be seen that I have dispensed with the ear-pieces *b*, *c*, *d*, and *d'*, (shown at Fig. 1,) although the last-mentioned parts (*d* and *d'*) may nevertheless be used, if desired. In a box made from this form of blank, in lieu of holding in place the extensions *a a* by means of wings, as *b c* in Fig. 1, I maintain them in position by pasting or gumming them to the side A of the box. Suitable adhesive matter having been applied to the parts *a a*, as represented by the oblique lines at their outer ends, they are folded over onto the part A on the hinge-lines 1 1 and secured thereto. Then a fold is made on the line 2 and the parts A B brought at right angles to each other. A fold is now made on the line 3, which will bring the parts A and B parallel to each other. Next fold on the line 4 and bring the part D parallel with the part A, and then fold the pasted part C down onto and secure it to the part D', after which close the ends in a manner similar to that described of the box shown in Sheet 1 of the drawings.

It will be observed that a box made from either of the forms of blanks shown will be provided with a double side, between the two walls of which the tongue F may be inserted and kept away from the contents of the box; and it will be understood, of course, that the extensions *a a* of the side A may be made longer or shorter than shown, and, instead of being present at both ends of the box, may be used at one end only.

A box made from a blank like that shown in Fig. 1, it will be seen, has paste applied only at one locality, and hence can be made with greater facility and cheapness, the stock employed for the ear-pieces not adding to the cost, as the same, if omitted, would be waste.

Of course many little changes in details may be made and the box still embody my invention, the gist of which I shall now proceed to claim, having so fully set forth my invention as to enable those skilled in the art to which it appertains to make and use the same.

I claim and desire to secure by Letters Patent—

1. A blank for a box comprising the parts A, D, B, and C', arranged widthwise of the sheet and adapted to form the four sides of a box, the said part A provided with an extension or extensions, *a*, adapted to be folded inward and form a double wall, and also provided with a lateral flap, C, for attachment to the exterior surface of the side flap, C', located at the other extremity widthwise of the blank, and the said part B being provided with suitable end pieces, and a closing tongue or tongues adapted to be inserted through an opening or openings along the line 1 between the plies of the double wall when the blank shall be folded up in box form.

2. In a box having a closing-tongue, a double wall, A *a*, the part or ply *a* provided with wings *b* and *c*, which hold the ply *a* in place by being respectively folded between the side pieces C C' and against the side piece D, substantially as shown and described.

3. In a box having a closing-tongue, a double wall, A *a*, the part or ply *a* provided with the triangular ear-piece *b*, folded in between the side pieces C and C′, as and for the purpose set forth.

4. In a box having a closing-tongue, a double side formed by the part A and its extension *a*, and each ply of the double side provided with a cut-out, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 15th day of May, 1884.

ARTHUR G. WILSON.

In presence of—
JACOB FELBEL,
JOHN O. GRODE.