

R. RITTER.
Paper-Boxes.

No. 153,281.

Patented July 21, 1874.

Fig 1.

Fig 2.

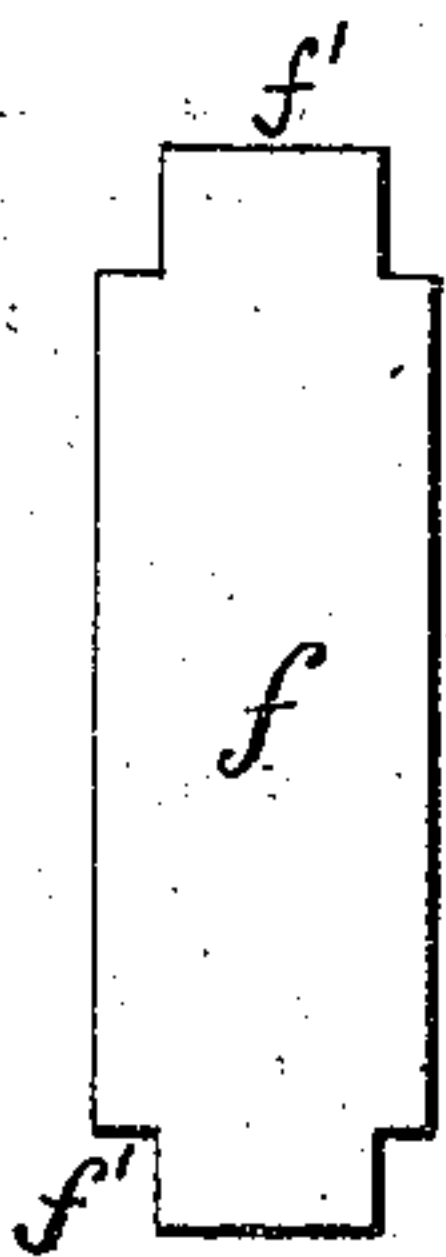
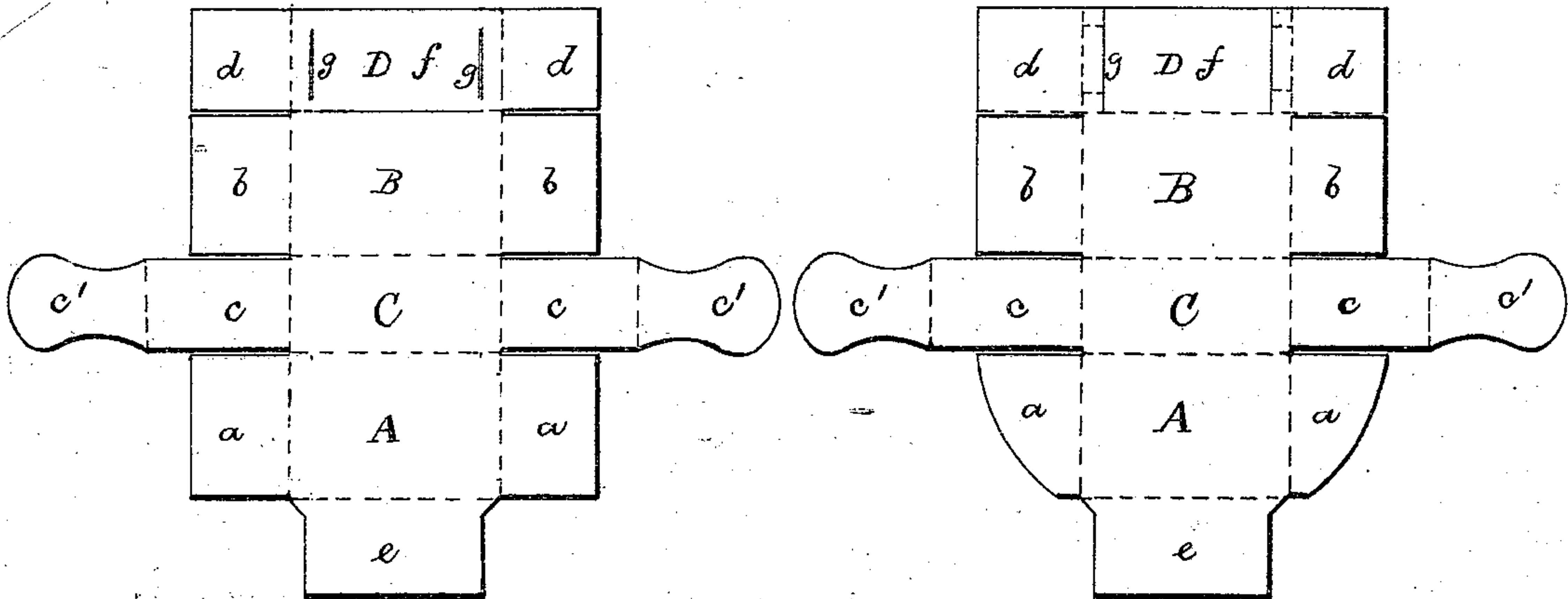
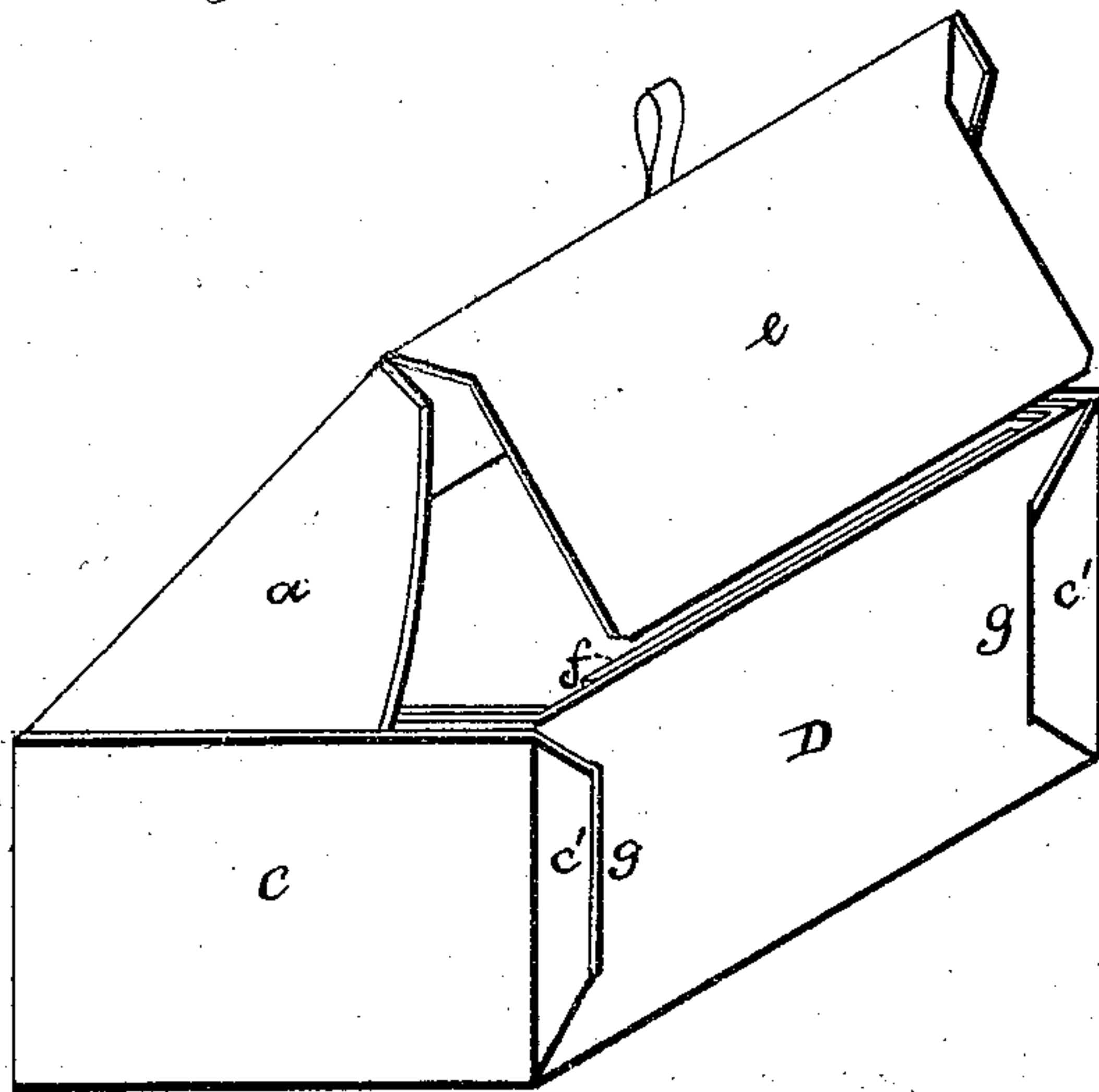


Fig 3

Fig 4



Witnesses.

Colburn Brooks
Chas. J. Hoock

Inventor

Reuben Ritter
per R. S. & A. Lacey
attys

UNITED STATES PATENT OFFICE.

REUBEN RITTER, OF WILKESBARRE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO SAMUEL RITTER AND SYLVESTER V. RITTER, OF SAME PLACE.

IMPROVEMENT IN PAPER BOXES.

Specification forming part of Letters Patent No. **153,281**, dated July 21, 1874; application filed June 17, 1874.

To all whom it may concern:

Be it known that I, REUBEN RITTER, of Wilkesbarre, in the county of Luzerne and State of Pennsylvania, 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, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to construct, without the aid of paste or other gumming material, a cheap and substantial self-sustaining paper box, which may be readily folded to complete the box and again unfolded, and which is adapted for packing in compact manner for transportation or storing, and which shall possess other advantages hereinafter fully set forth. It consists in the peculiar construction of the blanks with rectangular and curved flaps or wings, locking-flaps, and slots, all so arranged as, when properly folded together, to make a substantial box.

In the drawings, Figure 1 is a blank displayed, having all its wings rectangular. Fig. 2 is a blank displayed, wherein the wings attached to the top of the box are rounded or beveled. Fig. 3 is a view of the locking-card, which is inserted in the transverse slots to form a slot or loop for holding the locking flaps or tongues; and Fig. 4 is a view of the blank as displayed in Fig. 2, folded into a box with the top raised.

The blanks are divided into two equal parts by a central crease, which enables them to be folded together in smaller and more compact form for packing and storing. They are also otherwise suitably creased to form the sides and bottom and top, and insure evenness in the folding of the box.

The sections A and B are of equal dimensions, and form, respectively, the top and bottom of the box, and sections C and D form the sides thereof. Attached to the sections A and B are the rectangular rings *a b*, which have a width equal to their respective sections and a depth equal to sides C D, so that

when the box is folded these wings will close the entire end and present a uniform, smooth inner face for the chamber; and it will be seen that their rectangular form will prevent the pressing or turning out of the sides to which they may be attached without first releasing the locking-flaps hereinafter described. The wings *c* and *d* have a width equal to their corresponding section. The wing *d* has a depth equal to wings *a b*. Wing *c* is extended until its depth or length equals the width of sections A or B, which, in folding the box, permits it to extend entirely across the end, and entirely covering the other wings when folded. *c'* is a locking flap or tongue, which turns over the corner of the box, and is inserted in slots, as hereinafter shown. *e* is a locking flap or tongue attached to the side of section A; it is to be inserted in the slot, as hereinafter shown. *g* are transverse slots formed in the sides *d*. They are so placed as to be separated apart equal to the width of tongue *e*. *f* is a locking-card cut from stiff paper. Its ends are formed with the tenons *f'*, which fit the slots *g*. It is, by preference, made full width of the side D to give greater strength, and that a smooth inner surface may be preserved to the box. It is inserted in the slots *g* by slightly bending it. When inserted it closes firmly against the side D, and between it and said side is inserted the tongue *e*.

In folding the blank to perfect the box the tongue *e* is first inserted between the card *f* and side D; next wings *a* are turned in, then wings *d*; and, lastly, wings *c* are turned down over all; the tongues *c* lap over the corner and are tucked into slots *g* between the tenons *f* and the side D. When all the parts are put together it will be seen a strong substantial box is formed, and that said box cannot be forced open, except the tongues *c* be first removed. When only one end has its wings properly disposed the box will be retained firmly in shape, while the other end can be used for inserting or removing contents.

In Fig. 2 is another form of blank, whereby I secure a box having a hinged top, as shown in Fig. 4. The wings *a* are rounded so as to be of cam shape. This permits the side A to be

turned out from the box. These wings serve as guides to steady and keep in proper place the section A in the act of opening.

In folding the blank, as shown in Fig. 2, the wings *b* are first turned in, after having tucked in the tongue *e*, and next the cam-shaped wings *a'* are turned in; then the wings *d*, and, lastly, the wings *c*. This places the wings *a'* between wings *b* and *d*, which gives greater steadiness and firmness to the motions of the top A in act of opening.

The blanks are cut from a single sheet of strong paper. It will be readily seen that the box can be unfolded at pleasure.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

A box-blank constructed with the wings *a*, *b*, *c*, and *d*, slots *g*, card *f*, and tongues *e* and *e*, substantially as and for the purpose specified.

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

REUBEN RITTER.

Witnesses:

M. E. GAUGHAN,
JAMES MCKANE.