

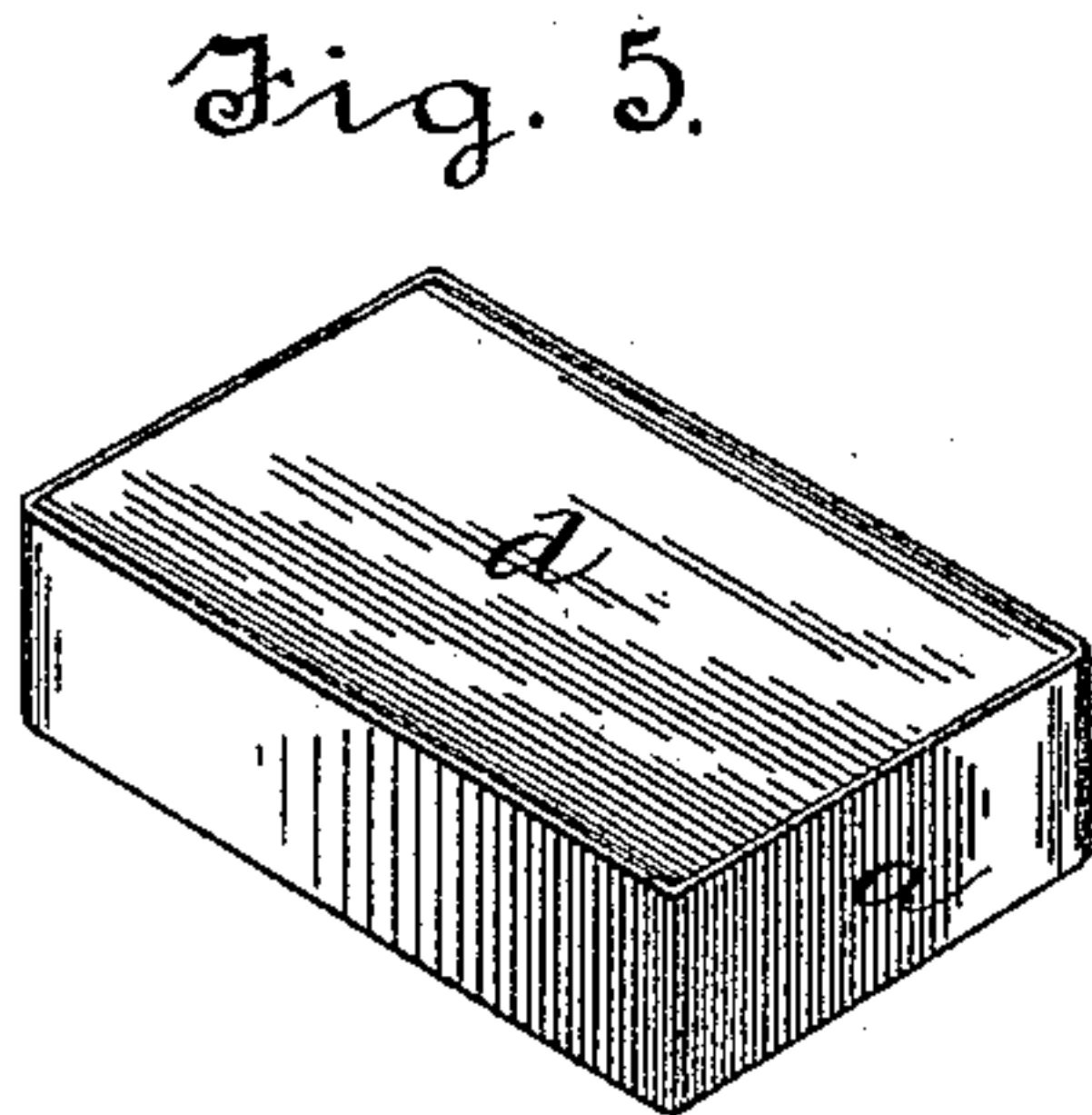
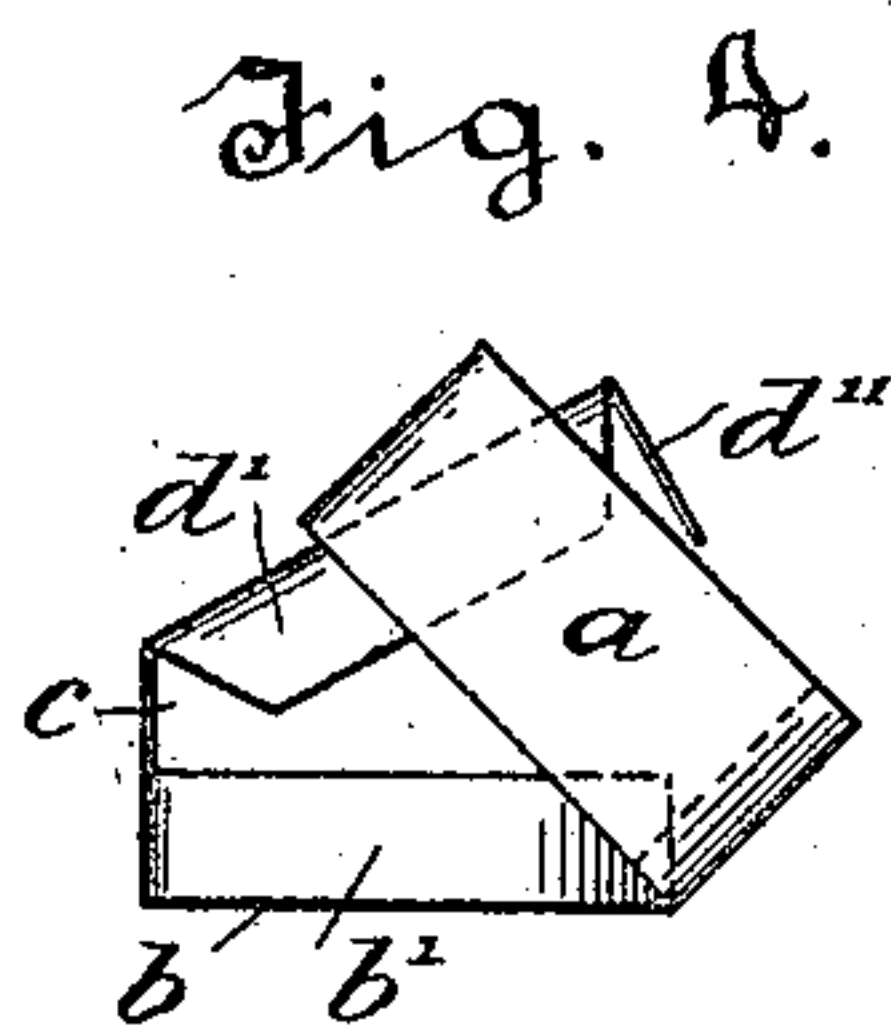
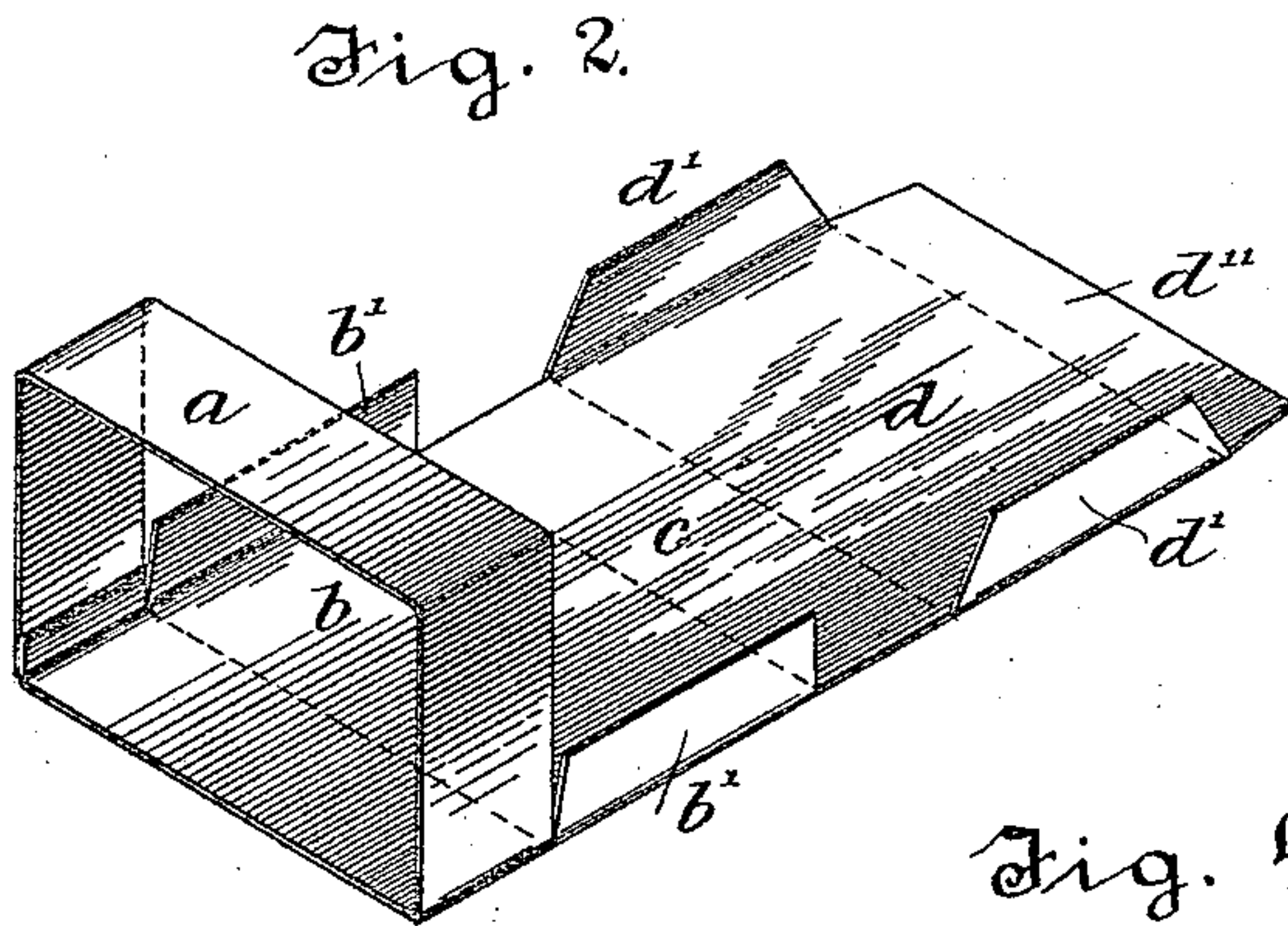
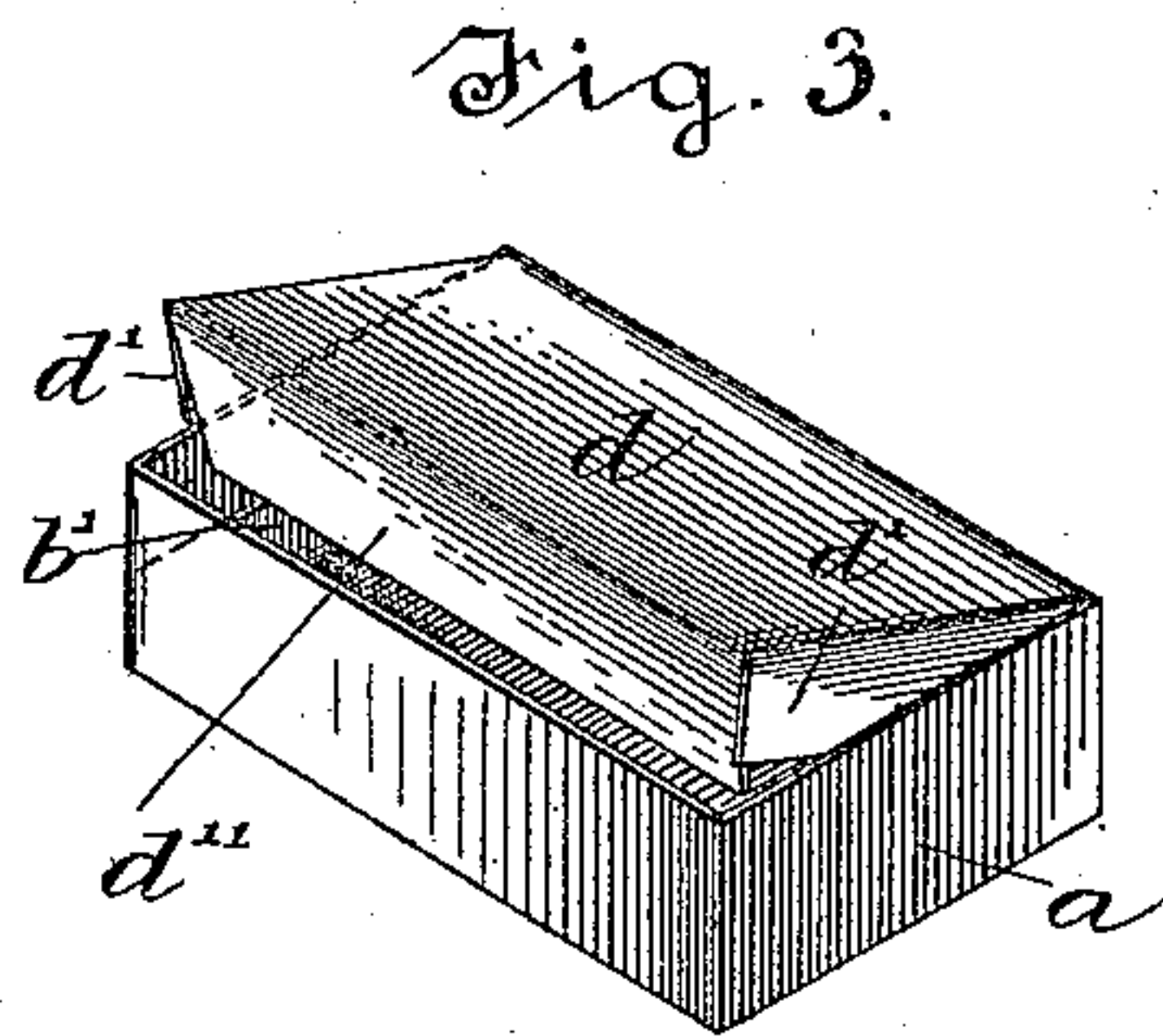
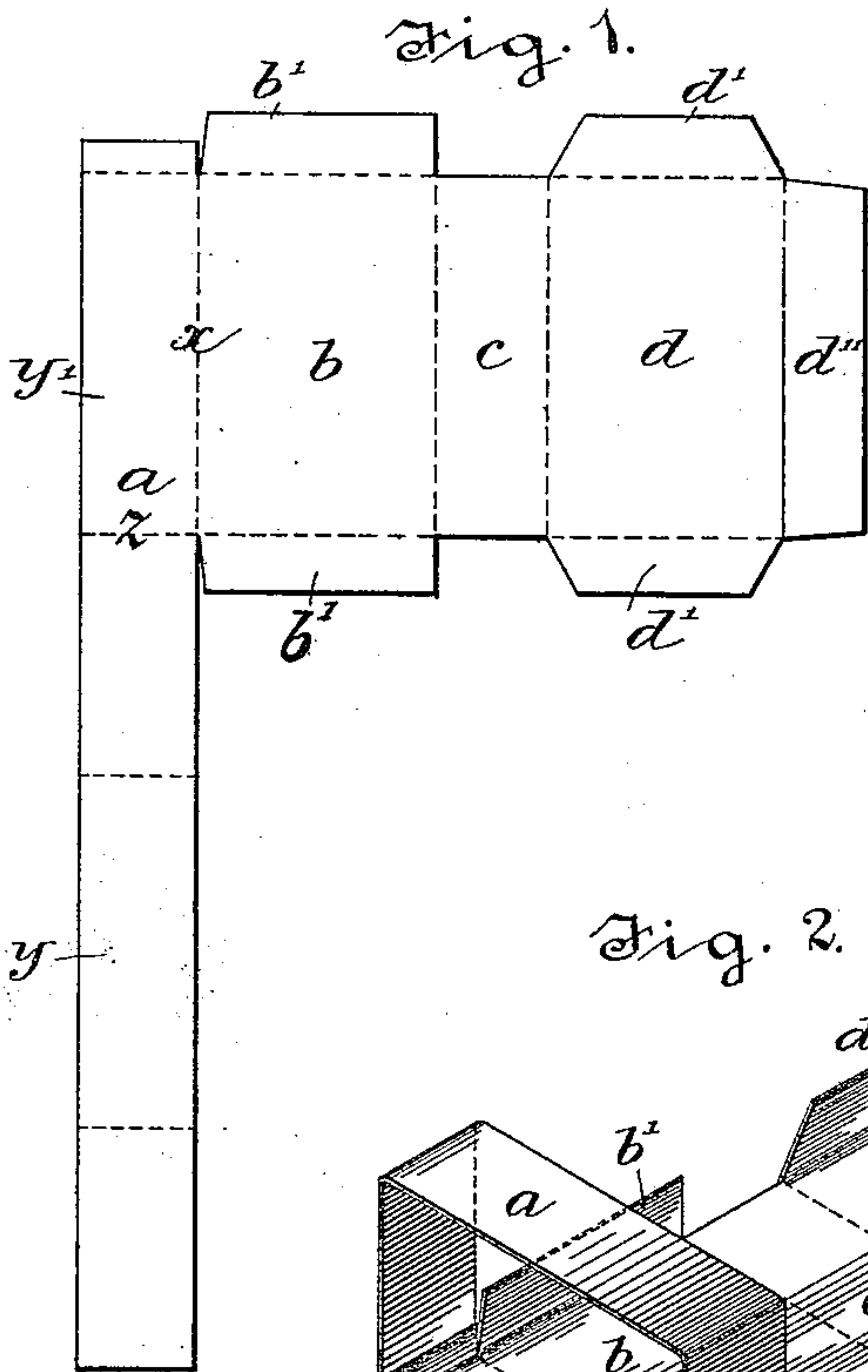
(No Model.)

2 Sheets—Sheet 1.

F. G. HOTCHKISS.
PAPER BOX.

No. 440,758.

Patented Nov. 18, 1890.



INVENTOR:

Frederick B. Hotchkiss

By *Henry Bonnell*
Attorney.

WITNESSES:

W. B. Longin
Robert S. Kelley

(No Model.)

F. G. HOTCHKISS.
PAPER BOX.

2 Sheets—Sheet 2.

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Fig. 6.

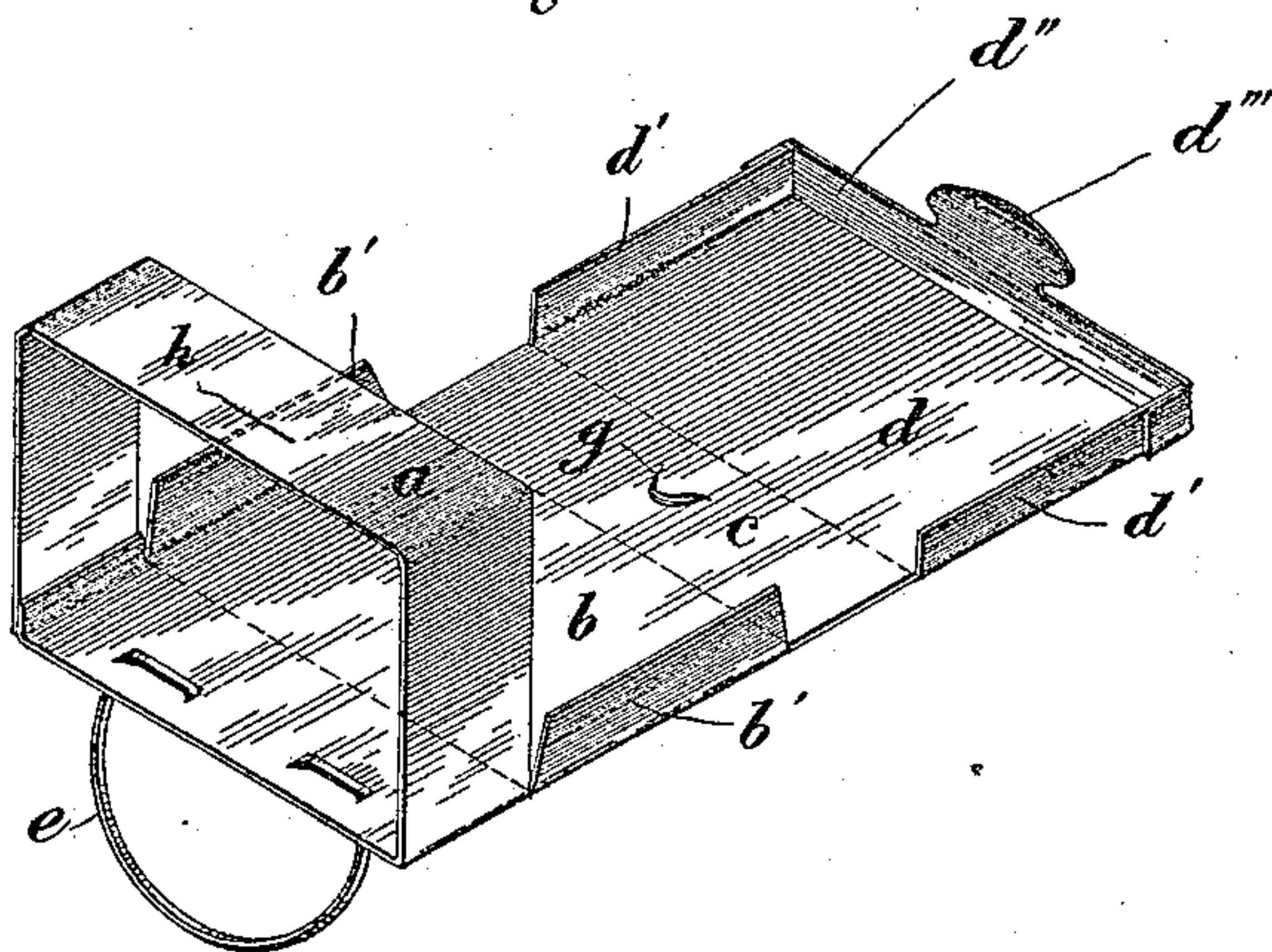


Fig. 7.

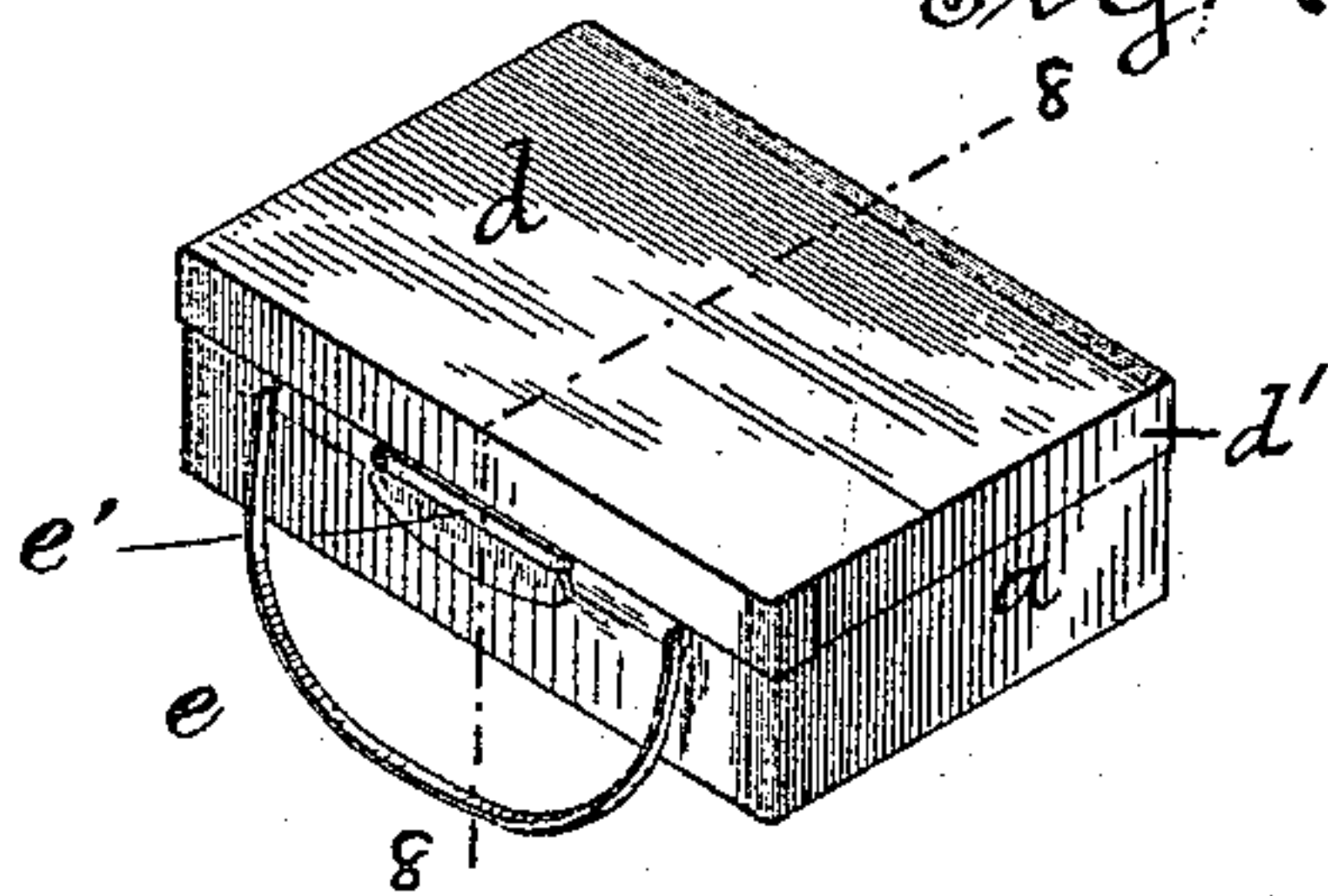
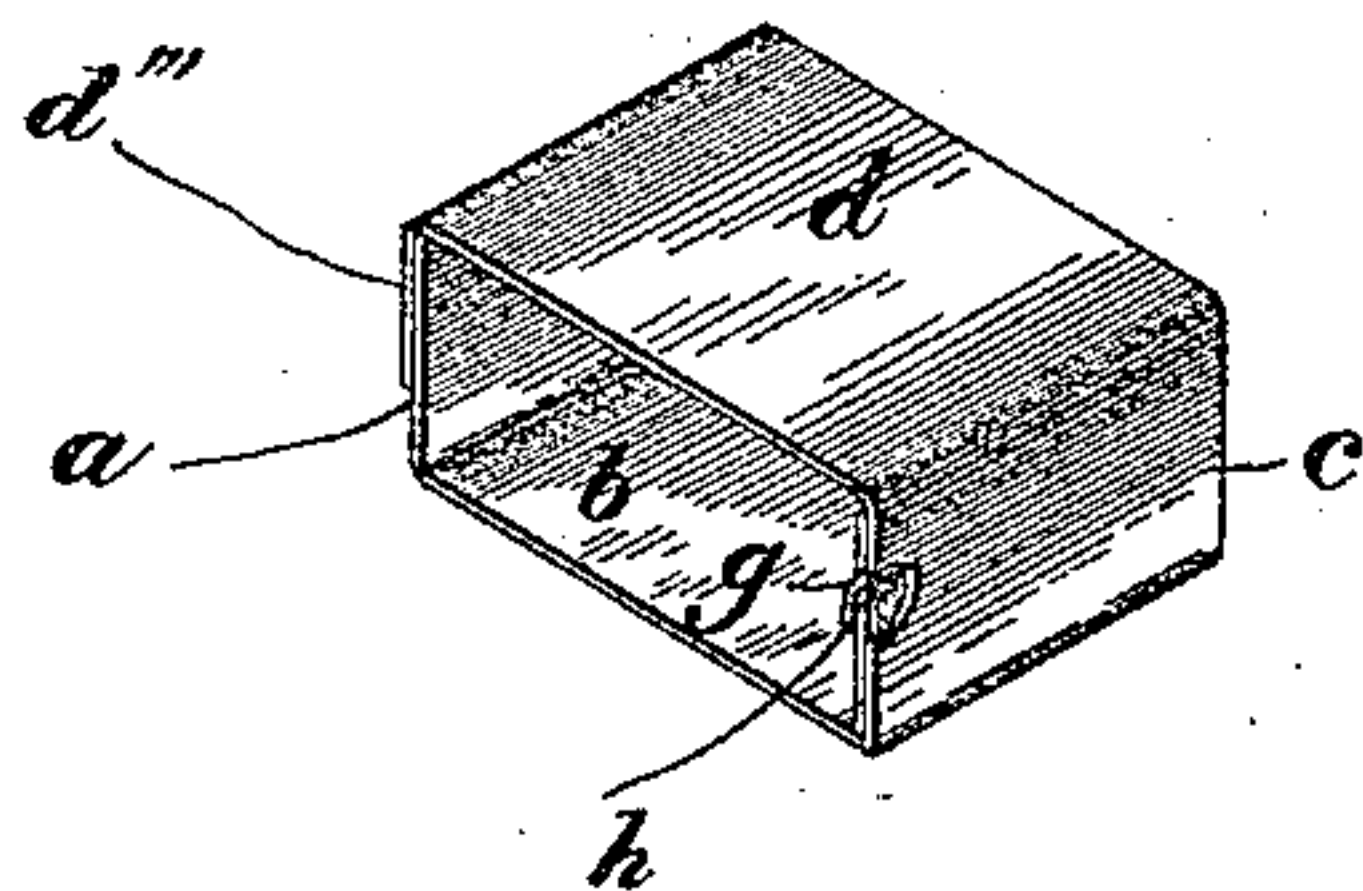


Fig. 8.



INVENTOR:

WITNESSES:

John F. Rennie.
W. B. Springer.

Frederick S. Hotchkiss.

By *Henry G. Bennett*
Attorney.

UNITED STATES PATENT OFFICE.

FREDERICK G. HOTCHKISS, OF BROOKLYN, NEW YORK.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 440,758, dated November 18, 1890.

Application filed April 12, 1890. Serial No. 347,623. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK G. HOTCHKISS, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain Improvements in Paper Boxes, of which the following is a specification.

My invention relates to the class of boxes, usually made of paper, known as "knock-down" boxes, and to that particular kind of knockdown boxes wherein the cover is in one piece or joined to the box.

The object of my invention is to so construct the box that it can be made economically, can be set up for use conveniently and quickly, and when so set up it will be strong and substantial.

In the accompanying drawings, wherein I have illustrated my improvements, Figure 1 is a view of a blank as it is cut and creased for making the box. Fig. 2 is a perspective view of the box when partly set up. Fig. 3 is a perspective view of the box, showing the cover portion with its flaps partly raised. Fig. 4 is an end view of the box, representing it in one of the stages of its formation. Fig. 5 is a perspective view of the box as it appears when set up and closed. Figs. 6, 7, and 8 illustrate another embodiment of my invention. Fig. 6 is a perspective view of this box as it appears when partly set up. Fig. 7 is a perspective view of the box when set up and closed. Fig. 8 is a sectional perspective view of the box when set up and closed. This view is a transverse section taken in the plane indicated by the line 8 8 in Fig. 7. These views are all on the same scale.

The characteristics of my box are an endless rectangular embracing-band, which forms the four sides of the box, and to which is joined at one side the bottom of the box provided with end flaps which are tucked up in the interior of the box. The cover of the box has also end flaps, and it is joined at its back edge to a tie-piece which unites it with the rear edge of the bottom. This tie-piece is of substantially the same width as the embracing band, and it forms a supplementary side to the box at the back thereof.

a represents the said rectangular band, the four sides thereof corresponding, respectively, to the four sides of the box in dimensions. The edge of one side of the band a is joined

to the material forming the bottom b of the box, an intermediate or tie-piece c , and the cover d , these parts being respectively arranged in the succession or order in which they are named. The bottom b will be provided with end flaps b' , and the cover d will be provided also with end flaps d' by preference. The cover will also have a tuck or flap d'' . The bottom b is hinged to the band a , the tie-piece c is hinged to the bottom, and the cover d is hinged to the tie-piece. The hinging may be affected by creasing the paper.

In setting up the box the end flaps are folded inward and the flap d'' and cover d passed through the band a in the manner indicated in Fig. 4. They are drawn through the band until the bottom b assumes the proper place, and the tie-piece c rests against the inner face of one side of the band. The box will now present the appearance seen in Fig. 3. It may now be filled and the cover d , with its flaps, tucked down inside the band. The box will then have the appearance represented in Fig. 5. The band embraces the folded parts and holds them in position snugly and firmly.

The dotted lines in Figs. 1 and 2 represent the lines of the creases for the folds and hinges. In Fig. 1 I have shown the strip of material that is to form the band a cut integrally from the same sheet of paper as the other portions of the box; but this is not essential, as the band may be cut separately and secured to the other portion along the dotted line x in Fig. 1; or the projecting portion of the strip that forms the band seen at y in Fig. 1 may be cut separately and be secured to the portion y' along the line z . The matter of making up the box from separate pieces and securing these pieces together by means of gum or paste is one that relates to the art of the box-maker and is within the knowledge of any skilled workman in this line of manufactures. If the box as represented in Fig. 2 is to be packed or stored, the band a may be flattened down in a well-known manner. The uniting of the bottom b with the cover d , through the medium of the tie-piece c , serves to secure the bottom firmly and avoids the necessity of employing any means for locking it fast when in place. As the bottom b is

joined to the band *a* at the front of the box and to the tie-piece *c* at the back thereof, it will be strongly supported against downward flexure at these points; but as it is not thus supported at its ends, in order to prevent the contents of the box from pressing it down at the ends in such a manner as to form openings, I stiffen the ends by forming flaps or tucks *b'* thereon, which, when bent up at a right angle to the bottom and supported against the box ends, stiffen the bottom on the same principle as angle-irons in metal structures.

The box may have any desired proportions and may be of any size. If in the form of a cube, its sides and ends will be equal, and consequently either of these may be called "sides" and either "ends."

I will now describe more particularly the embodiment of my invention illustrated in Figs. 6, 7, and 8. In most respects this box is the same as that just described—that is, it has a band *a*, and the bottom *b* and cover *d* are tied together by an intermediate piece *c*, the width of which is substantially equal to the depth of the box. In this latter embodiment, however, the end flaps *d'* *d'* on the cover *d* are turned up and united to the flap *d''* thereon, and when the box is closed, as in Fig. 7, these united flaps take over the outside of the band *a*. On the flap *d''* is formed a notched tongue *d'''*, and through four holes or slits in the front of the band *a* or front of the box is threaded a tape or cord, which forms a convenient bail *e*, by which the box may be carried. The middle loop or bight *e'* of this tape receives the notched tongue *d'''* on the cover-flap, and when this tongue is inserted in said loop and the tape drawn tightly the cover will be fastened firmly in place. In this embodiment I have also shown the manner in which my improved box may be set up without passing the cover through the band *a*. However, when the box is set up in this way the tie-piece *c* will be exterior to the adjacent side of the band. I prefer in this case to provide the tie-piece *c* with a tongue *g*, which is passed through a slit *h* in the adjacent side of the band *a* when the box is set

up. This tongue serves to hold the piece *c* up to the band and also to support the bottom *b* and enable the same better to resist internal pressure.

Having thus described my invention, I claim—

1. An integral blank for a knockdown paper box, comprising the endless band *a*, forming a rectangular frame when expanded, the bottom piece *b*, joined at one side to said band and provided with end flaps *b'*, the cover-piece *d*, provided with end flaps *d'*, and the tie-piece *c*, between and uniting the pieces *b* and *d*, said tie-piece *c* being substantially equal in width to the band *a*, substantially as set forth.

2. A knockdown paper box comprising a rectangular endless band *a*, which forms the upright sides and ends of the box, a bottom *b*, joined at its front edge to said band and having flaps *b'* on its ends, which flaps project upward inside of the box at the ends thereof, a tie-piece *c* at the back of the box, joined at its lower edge to the bottom *b* and forming a supplementary side to the box at the back thereof, and the cover *d*, joined at its rear edge to the upper edge of the said tie-piece *c* and provided with end flaps *d'*, adapted to tuck into the box when the cover is closed, substantially as set forth.

3. A paper box consisting of a rectangular band *a*, provided with a slit *h* in one of its sides, the bottom *b*, joined to the side of the band opposite to that having in it said slit, the cover *d*, and the tie-piece *c*, which ties together the said bottom and cover, said tie-piece being as wide as the box is deep, and having a tongue *g*, adapted to engage the slit *h* when the box is set up, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

FREDERICK G. HOTCHKISS.

Witnesses:

HENRY CONNETT,
J. D. CAPLINGER.