

No. 707,962.

Patented Aug. 26, 1902.

O. FEIL.
COLLAPSIBLE BOX.

(Application filed Apr. 9, 1902.)

(No Model.)

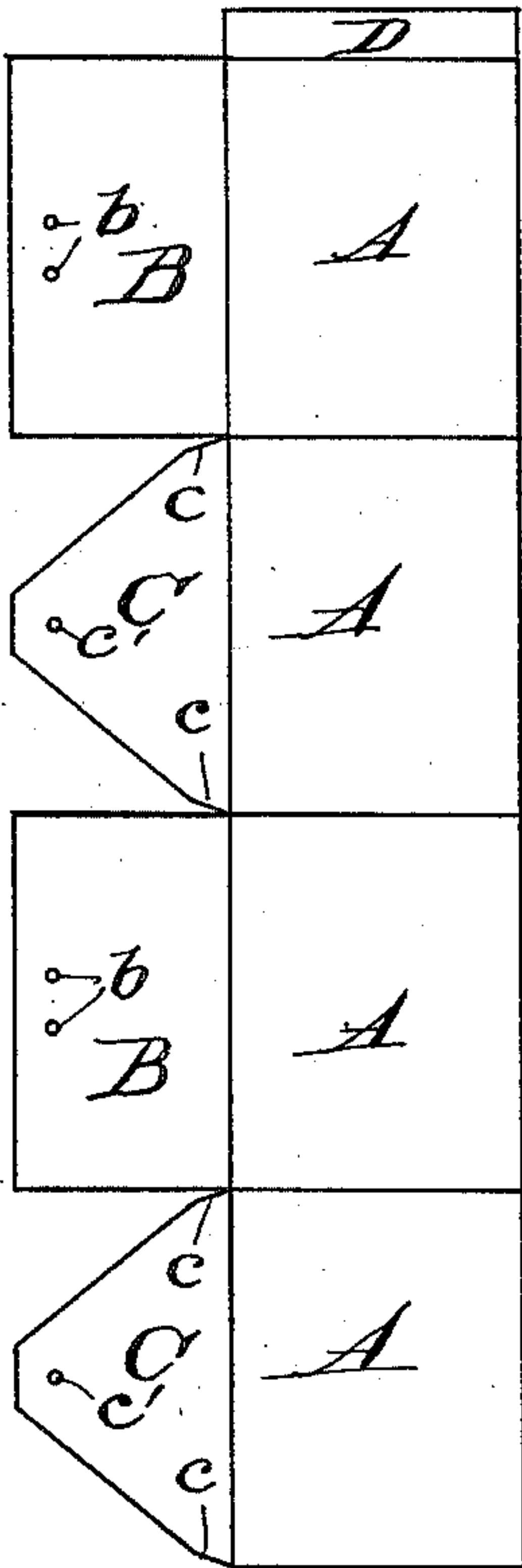


Fig. 2

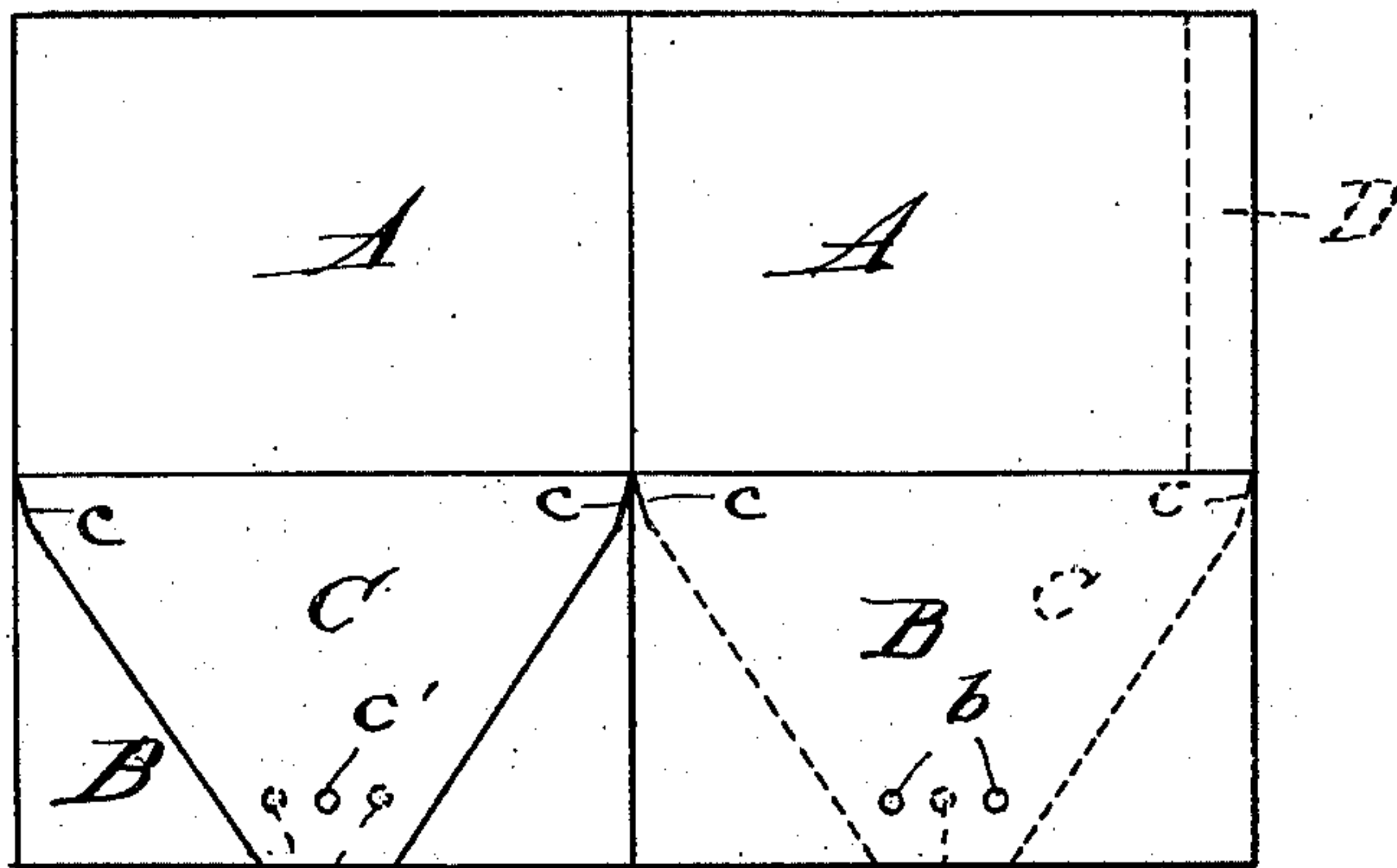
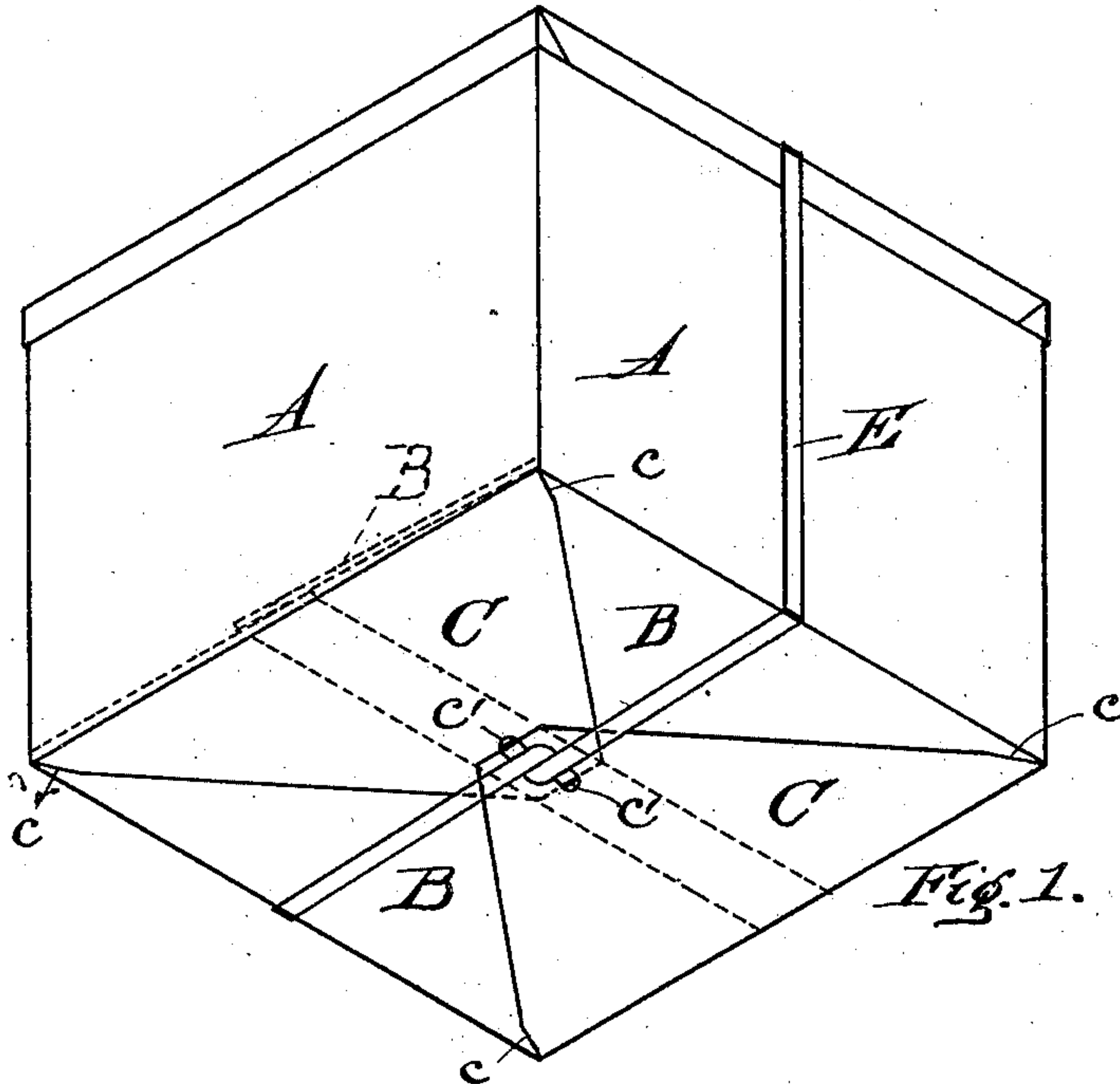


Fig. 3

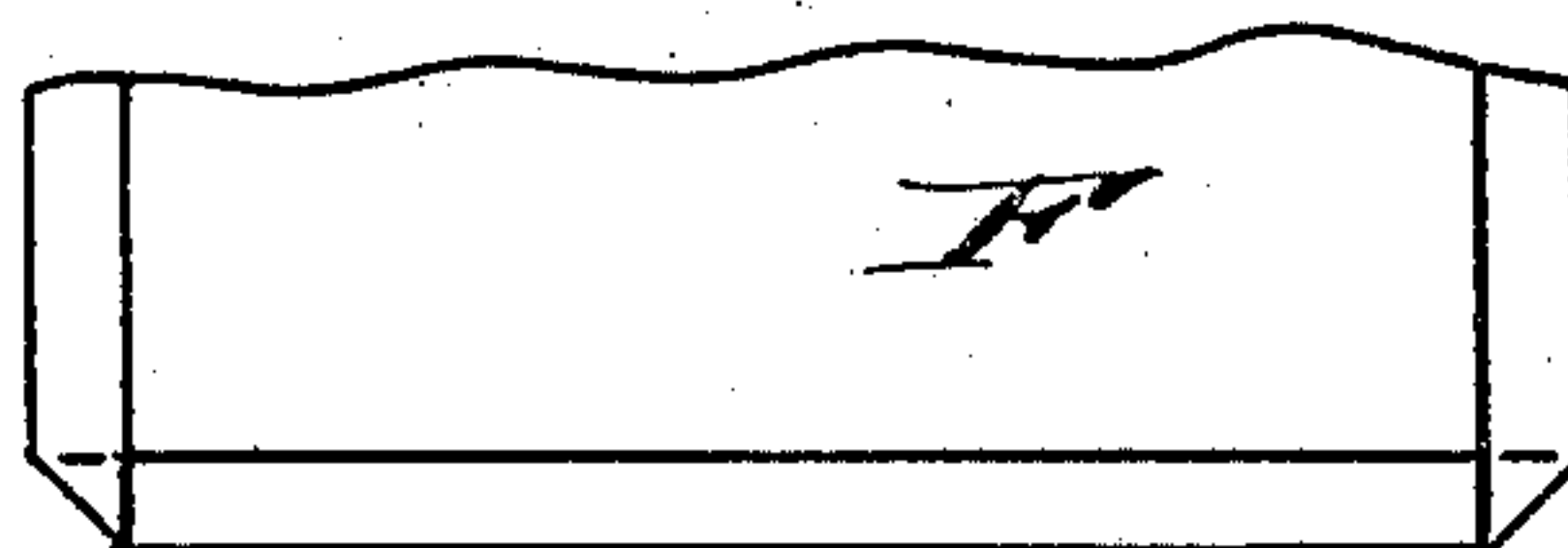


Fig. 4.

WITNESSES:

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COLLAPSIBLE BOX.

SPECIFICATION forming part of Letters Patent No. 707,962, dated August 26, 1902.

Application filed April 9, 1902. Serial No. 102,072. (No model.)

To all whom it may concern:

Be it known that I, OTTO FEIL, a citizen of the United States of America, and a resident of the city of Atlanta, in the county of Fulton and State of Georgia, have invented a certain new and useful Improvement in Collapsible 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to boxes of the class commonly known as "knockdown" or "collapsible" boxes, the object being to provide a box of this class which will be easily set up by an inexperienced person and will present when so set up substantially the same appearance as a non-collapsible box and which when collapsed may be, with its cover, packed in bundles and shipped flat.

To these ends the device consists in the box herein described, and shown in the accompanying drawings.

In the drawings, Figure 1 is a perspective view showing the bottom and two sides of the box proper and two edges of the cover set up. Fig. 2 is a flat projection of the blank. Fig. 3 is a view of said blank as appearing when collapsed. Fig. 4 shows the same cover flattened or collapsed by folding two opposite sides inwardly, whereby the other two sides are thrown outwardly.

In the figures like reference characters are uniformly employed in the designation of corresponding elements of construction in all the views.

As shown in Fig. 2, the blank for the body of the box consists of rectangular parallel side portions A, which are alternately provided with flaps B and C, both of such width as to lap in the center, as shown in Fig. 1, and the flaps C being tapered substantially as shown and having their edges cut away, as shown at c, so that when they are upright or in the same plane as the correlative sides A or bent slightly toward each other out of said plane the said corners will not interfere with the folding down of the flaps B, and yet being at a more obtuse angle to their bases than

are their other tapering edges will tend to stiffen the lower corners of the box when set up and prevent its being crushed by forcible contact. The usual flap D is provided, which being joined to the adjacent side A in finishing enables the box to be folded into the condition shown in Fig. 3, which is its knocked-down form. In the ends of these flaps B and C are holes, as at b and c', which when the box is set up coincide and which receive the tape E, which tape is passed through both holes in one of the flaps B and then through both holes in the other flap B, one end being passed through one of the holes at c' in one flap C and the other end being passed through the hole c' in the other flap C. In setting up the flaps B the sides A being previously brought into parallelism are folded down at substantially a right angle to the sides, which they join, and so that they lap at their inner ends, whereby the holes at b in both register with each other, after which the flaps C are folded down upon the said flaps B, so that the holes at c' therein register with the one of the holes at b nearest the side A to which the said flap C is joined. The flaps C are of such length that the end of one registers with the contiguous edge of the hole in the other when folded, so that the tape binds them down, forming a strut to prevent the sides of the box to which the said flaps C are joined from being converged by pressure. The tape is then drawn taut and crossed, as shown in Fig. 1, or tied, after which the ends may be passed over the cover and again secured, thereby obviously holding the cover in place. It is obvious that the perfect registry of the holes in the flaps B and C and the drawing taut of the tape E therein will preserve the sides of the box in proper rectangular relative positions and that the bottom will be reinforced and stiffened. The lapping of the free edges of the flaps B and the passage of the tape E across the bottom of the box at a right angle to said lapped portion obviously supports the said bottom, whereby the box may be made of lighter pasteboard than would otherwise be the case, while the drawing of the tape upon the flaps obviously strains said flaps in a direction to draw each side against the two adjoining sides as abutments, the whole forming a very satisfactory box of considerably

lighter weight than is possible with any of the well-known constructions. It is plain that the bottom can neither be pressed outwardly nor inwardly unless some connection
5 is disrupted. The covers F are made in any usual form and are folded flat either by bending outwardly two opposite edge flanges and folding inwardly the other two or by folding inwardly the corners and folding outwardly
10 all the edge flanges.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

15 In a collapsible box, sides and flaps secured thereto and adapted to fold across the rectangle bounded by said sides when formed and to lap their inner edges, one pair of op-

posite flaps being each provided with two holes adapted to register when said sides are lapped and the other opposite pair being each
20 provided with one hole adapted when said sides are lapped to register with the hereinbefore-mentioned registered holes and of such length as to reach when lapped just up to the holes
25 in each other, and a tape passed through the three holes in conjunction in contact with the ends of the last-named flaps and fastened.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

OTTO FEIL.

Witnesses:

A. P. WOOD,
EDWD. P. WOOD.