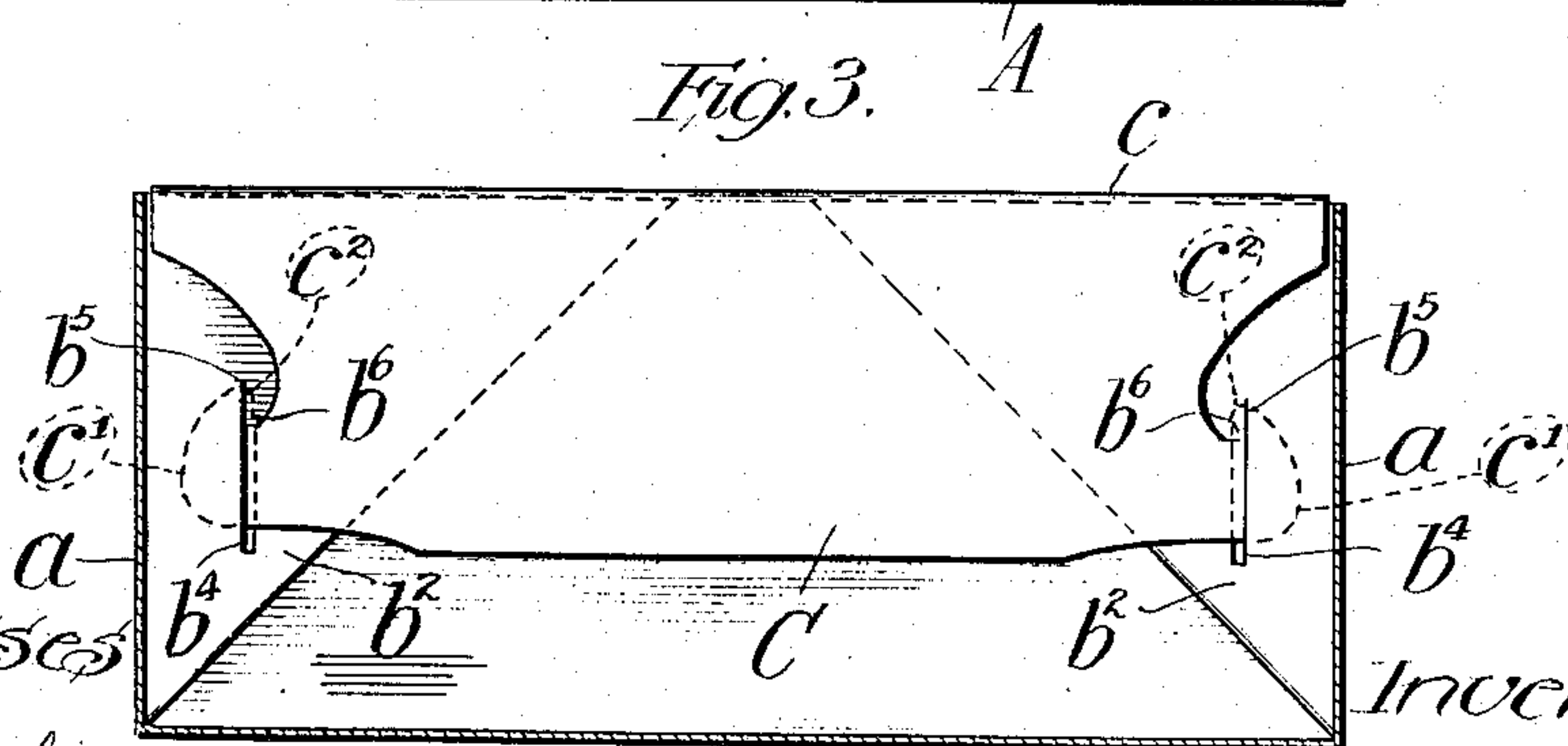
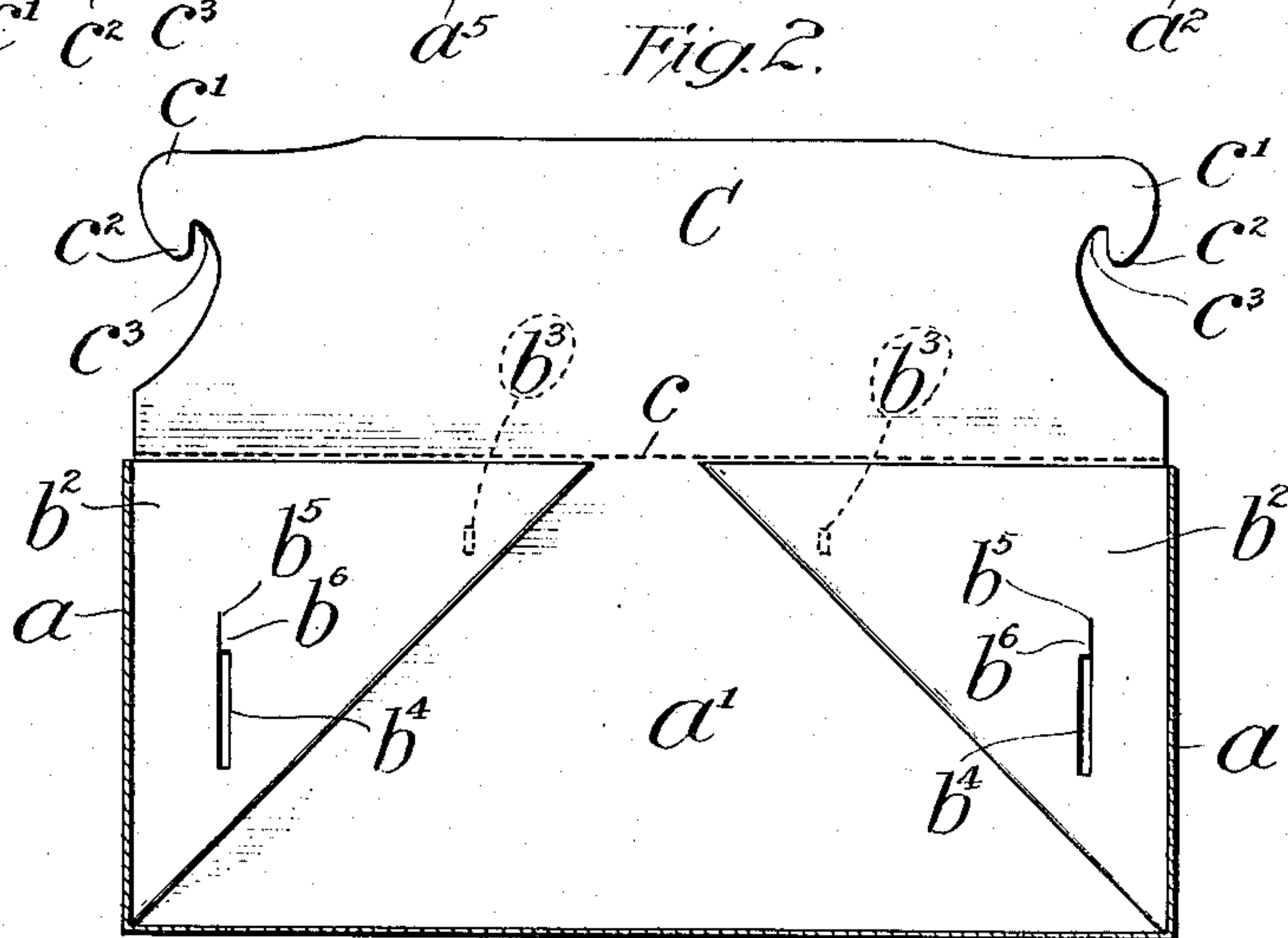
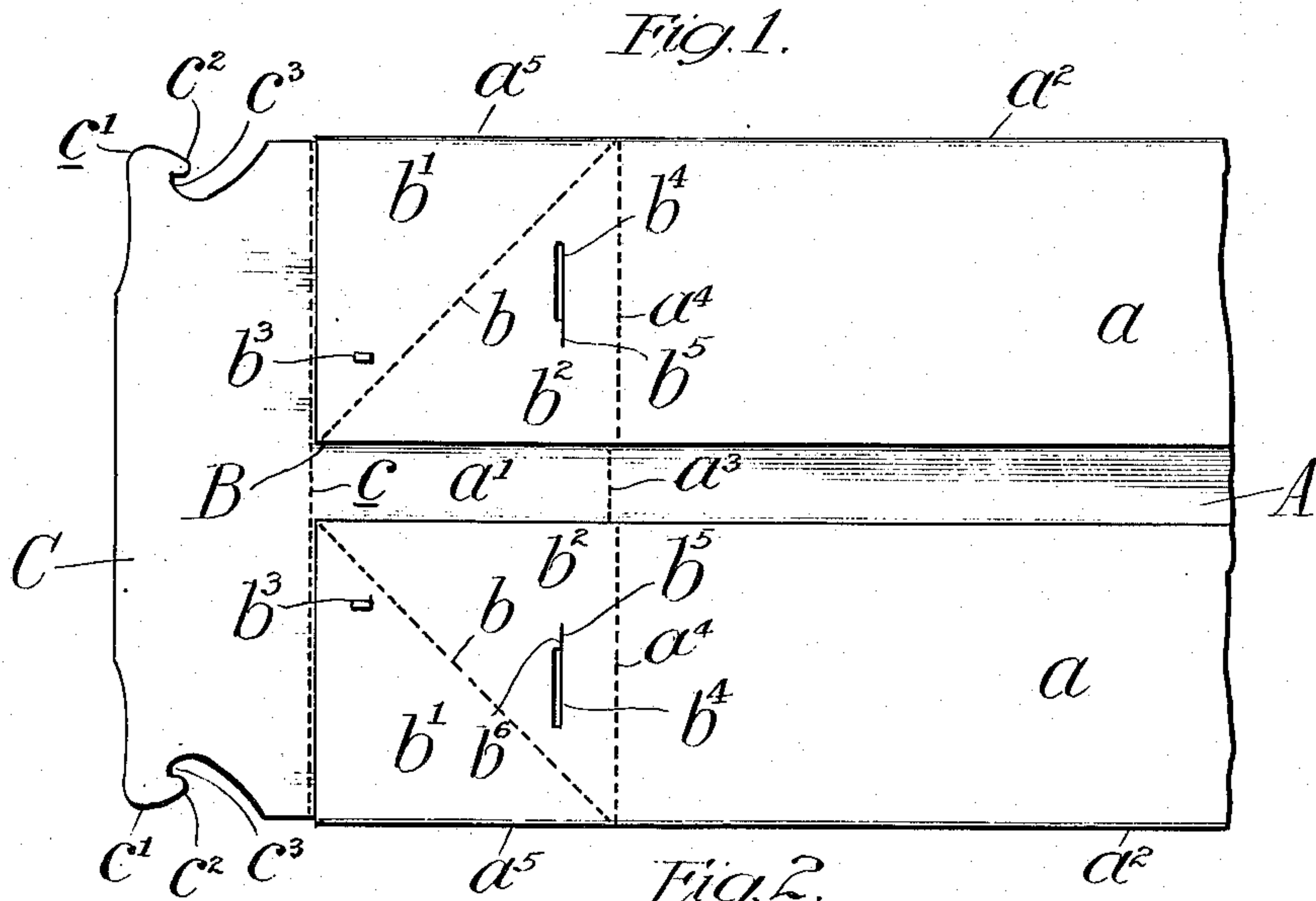


S. FREUND.  
COLLAPSIBLE BOX.  
APPLICATION FILED NOV. 3, 1908.

930,953.

Patented Aug. 10, 1909.



Witnesses  
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# UNITED STATES PATENT OFFICE.

SAMUEL FREUND, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO A. A. ARNOLD, OF CHICAGO, ILLINOIS:

## COLLAPSIBLE BOX.

No. 980,953.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed November 3, 1908. Serial No. 460,921.

*To all whom it may concern:*

Be it known that I, SAMUEL FREUND, a citizen of the United States, and residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Collapsible Boxes, of which the following is a complete specification.

This invention relates to improvements in collapsible boxes and more particularly to a collapsible box of that class in which the walls are so connected together that when two opposite walls are raised to an upright or open position the remaining walls will be automatically brought to an upright position.

Heretofore in boxes of this class it has been difficult to so secure the walls in open position that they will not collapse or become disconnected when outward strain or pressure is exerted on the pair of walls which are automatically opened. This is the cause of considerable annoyance, since if the box is so full that its contents crowd on the walls, the latter will spring apart and produce an unsightly as well as annoying package.

The object of this invention is to provide a collapsible box in which a portion of the walls are automatically thrown to open position by like movement of the remaining walls, and in which means are provided for so locking the walls in open position that they cannot be collapsed by outward pressure thereon.

It is a further object of the invention to provide a collapsible box adapted to be easily and quickly set up and the walls thereof locked together on the inner side of the box so that the danger of the locks becoming disengaged by catching on extraneous objects is entirely obviated.

The invention consists of the matters hereinafter described in the specification and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a fragmentary plan view of the collapsed box. Fig. 2 is a transverse section of the box in open position, but showing the locking flap out of locking position. Fig. 3 is a view similar to Fig. 2, but showing the locking flap in locking position.

As shown in said drawings: A indicates the bottom of the box and is provided with integrally attached side and end walls indi-

cated respectively by  $a$  and  $a'$ , one pair of which, as herein shown the side walls, is adapted to be folded along the lines  $a^2$  and lie flat upon said bottom when the box is collapsed, as shown in Fig. 1. The other walls  $a'$ , only one of which is shown, are adapted, when the box is collapsed, to lie in the plane of the bottom, and when in open position to be folded on the line  $a^3$ .

Integrally connected to the adjacent ends of the walls  $a$  and  $a'$ , along the folding lines  $a^4$ — $a^5$  respectively, is the infold, indicated as a whole by B, and each of which is adapted to fold diagonally on the folding line  $b$ , thereby dividing the infold into a fixed and a hinged portion indicated by  $b'$ — $b^2$  respectively. Said fixed portion  $b'$  of the infold may be rigidly secured to the inner face of the wall  $a'$  in any preferred manner but as shown it is secured thereto by means of a stitch or staple  $b^3$  near the inner corner of said portion. The hinged portion  $b^2$  of said infolds are each provided with an elongated locking slot or aperture  $b^4$ , which when the box is collapsed lies parallel to the folding line  $a^4$ , as shown in Fig. 1, and when the box is open, is vertically disposed adjacent the corner of the box, as shown in Figs. 2 and 3.

On the outer or upper margin of the wall  $a'$  is a locking flap C, which when the box is open, is adapted to fold inwardly on the folding line  $c$ , and over the infolds B. At each end of said locking flap is a hook  $c'$ , comprising a point  $c^2$  and a neck  $c^3$ , the latter of which is of a width equal to the length of the locking aperture  $b^4$ , and the aperture is provided at the end thereof adjacent said flap with a slit  $b^5$  through which the point of the hook is adapted to pass. Said slit forms a shoulder  $b^6$  behind which said point engages when in locking position, as shown more clearly in Fig. 3.

When it is desired to erect the box the walls  $a$  are turned to an upright position and the hinged portions  $b^2$  of the infolds B draw the walls  $a'$  to an upright position with said portions  $b^2$  folded back along the lines  $b$  upon the fixed portions  $b'$ . The locking flaps C are then folded inwardly and the hooks inserted in the locking slots  $b^4$  thereby rigidly locking said flaps to the infolds and preventing the box from collapsing. Inasmuch as said hooks are firmly engaged in the apertures  $b^4$  it is obvious that



the wall  $a'$  cannot return to collapsed position until said hooks are released, so that the danger of the flaps becoming disconnected and permitting the wall to fall is  
5 entirely obviated.

I claim as my invention:

1. In a device of the class described the combination with a bottom of a plurality of walls hinged thereon, infolds connecting adjacent ends of contiguous walls, said infolds  
10 being folded diagonally to provide a fixed portion adapted to be rigidly engaged to one of the walls and a slotted, hinged portion hinged to the adjacent wall and to said  
15 fixed portion, said hinged portion having a shoulder intermediate the ends of said slot, a locking flap on one of said walls adapted to be folded over said infold and hooks on the ends thereof adapted to project through  
20 the slots of said hinged portions and engage behind said shoulders.

2. In a device of the class described the combination with a bottom of walls hinged thereto, infolds hinged to the ends of opposite walls and diagonally across the contiguous walls and adapted to be folded back  
25 parallel with the latter walls, an elongated locking aperture in each infold, each having a longitudinally extended slit at one end thereof providing a shoulder, a locking flap  
30 on said last named wall and adapted to fold over the infolds, and means on the ends thereof adapted to project through said apertures and engage behind said shoulders.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.  
35

SAMUEL FREUND.

Witnesses:

E. R. WALKER,  
W. W. WITHEBURY.