

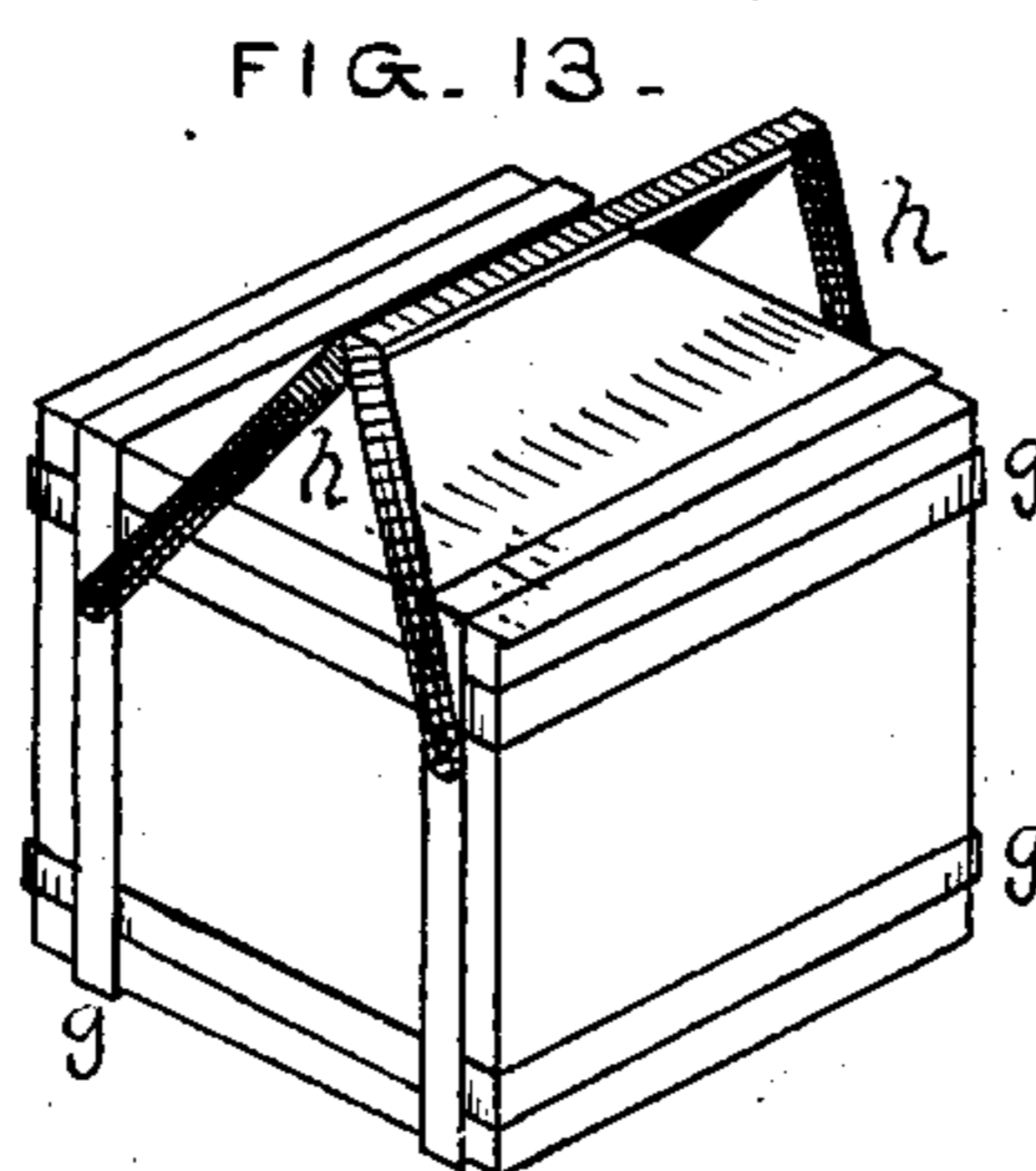
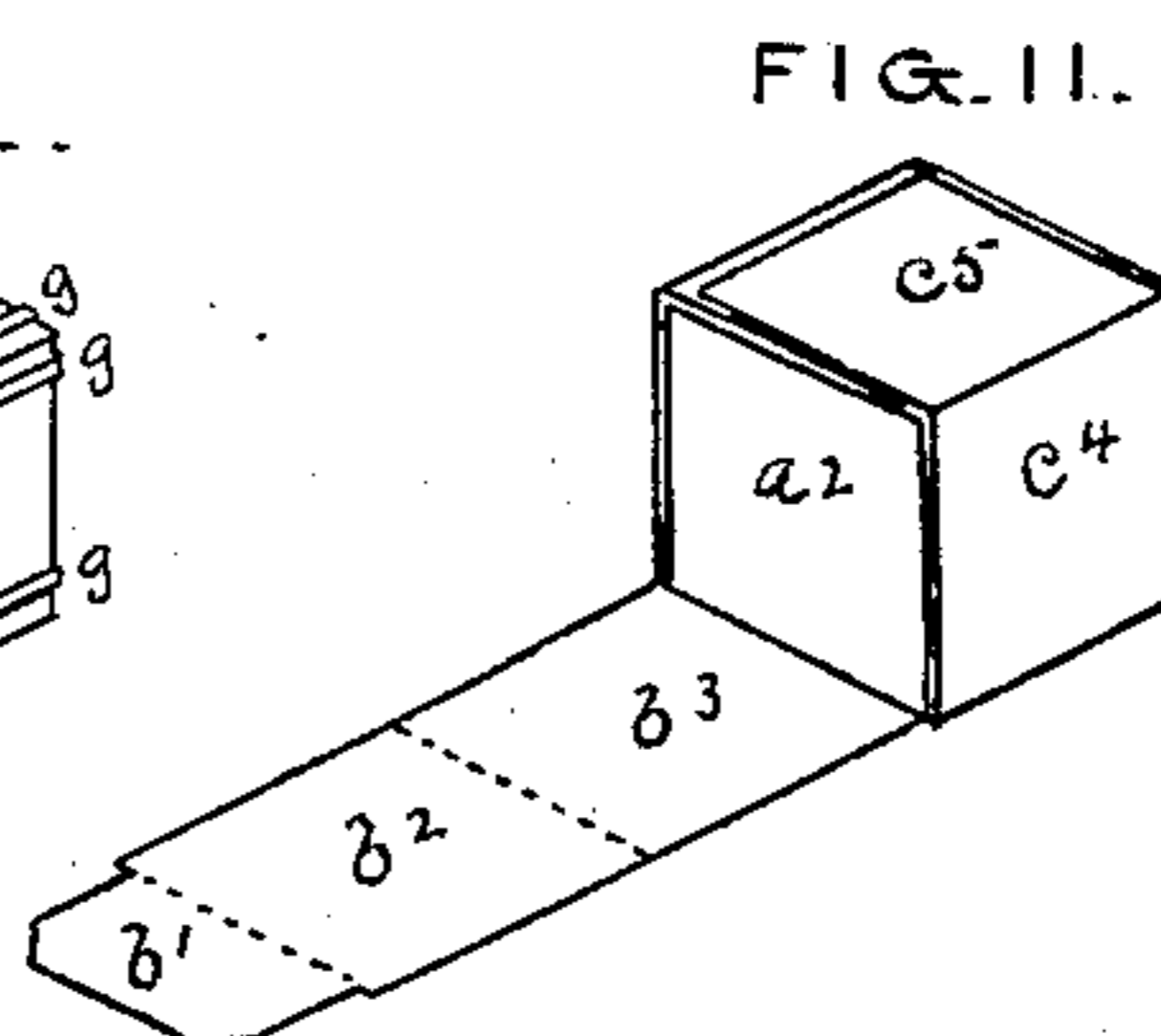
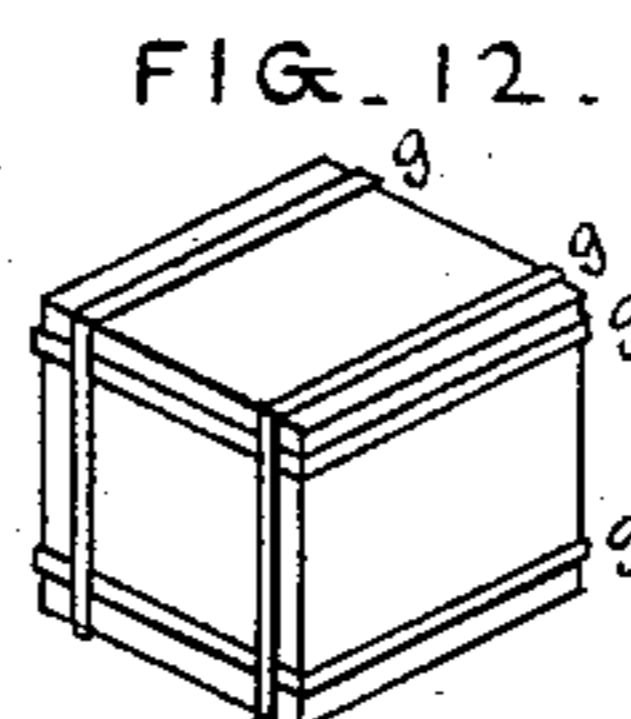
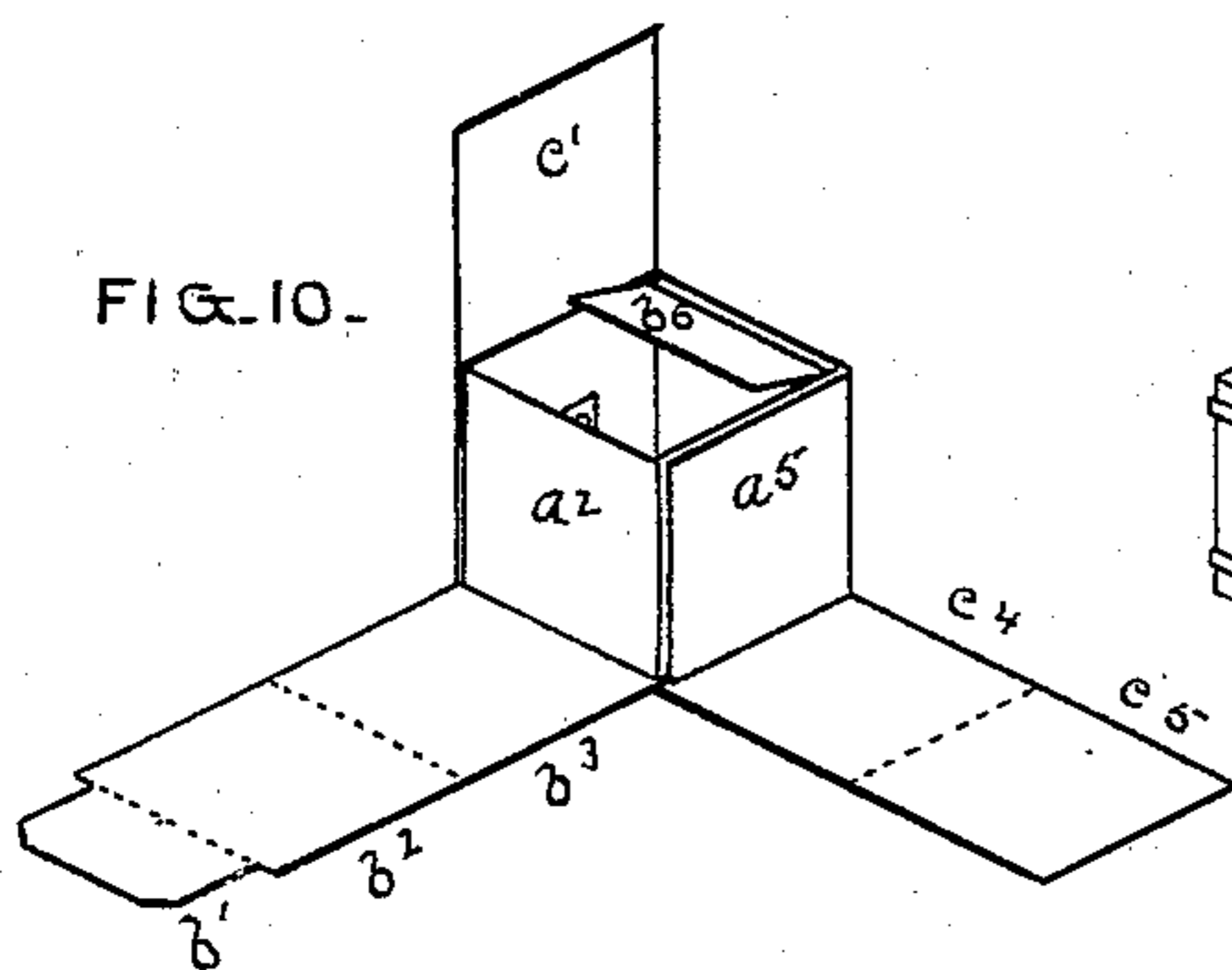
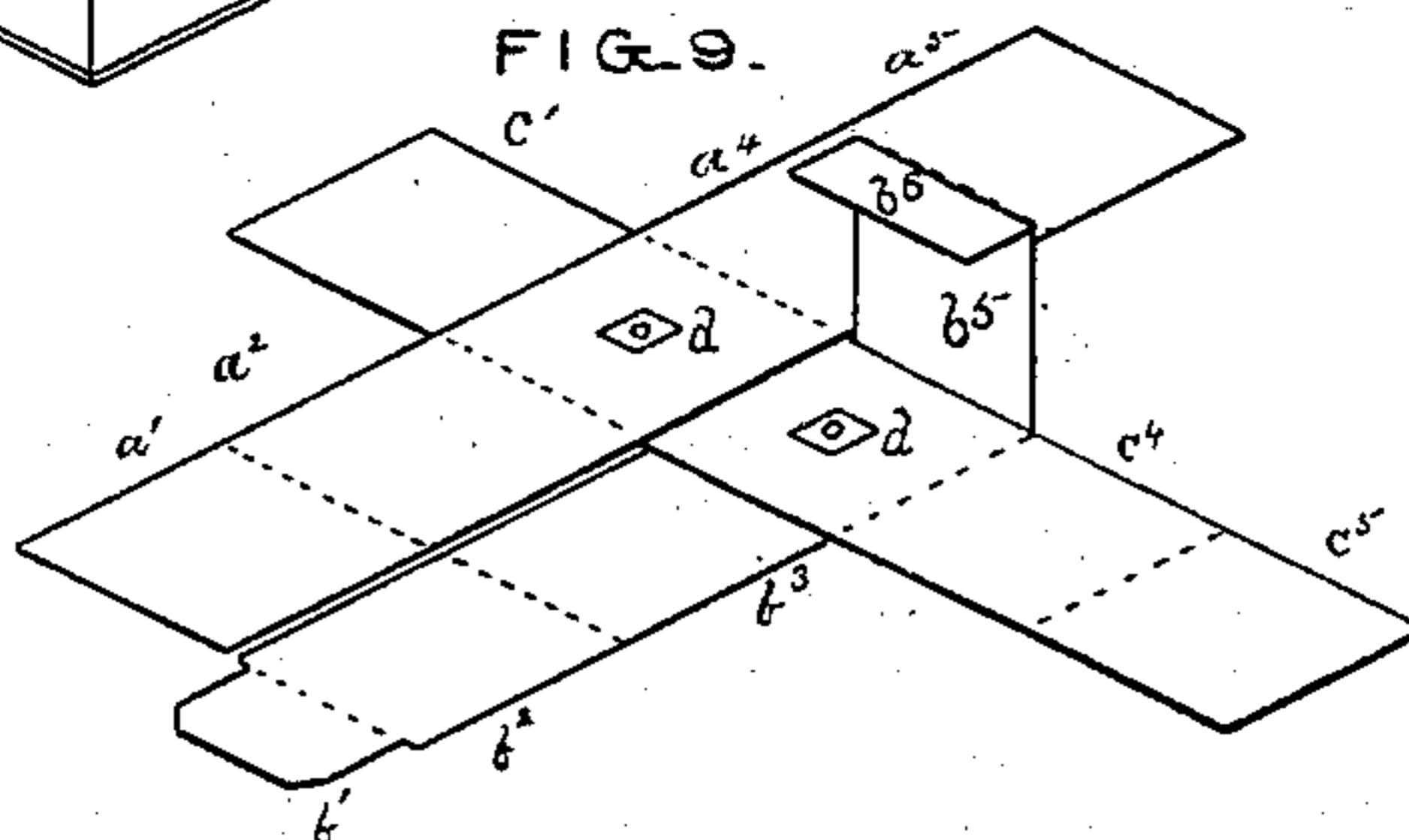
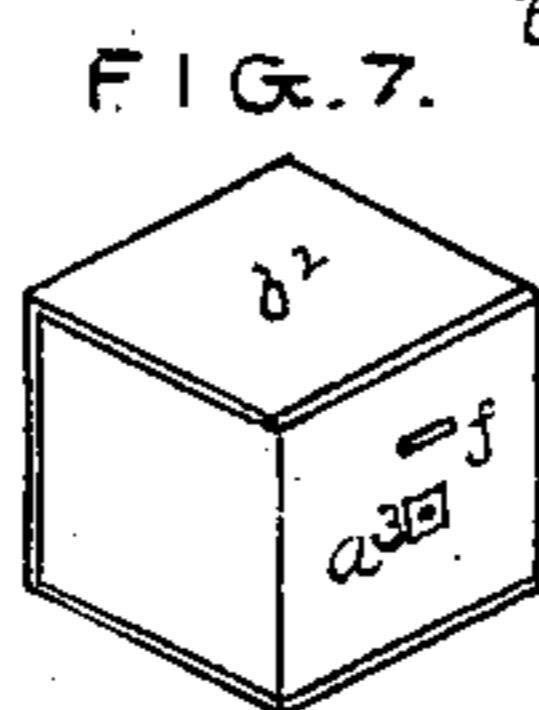
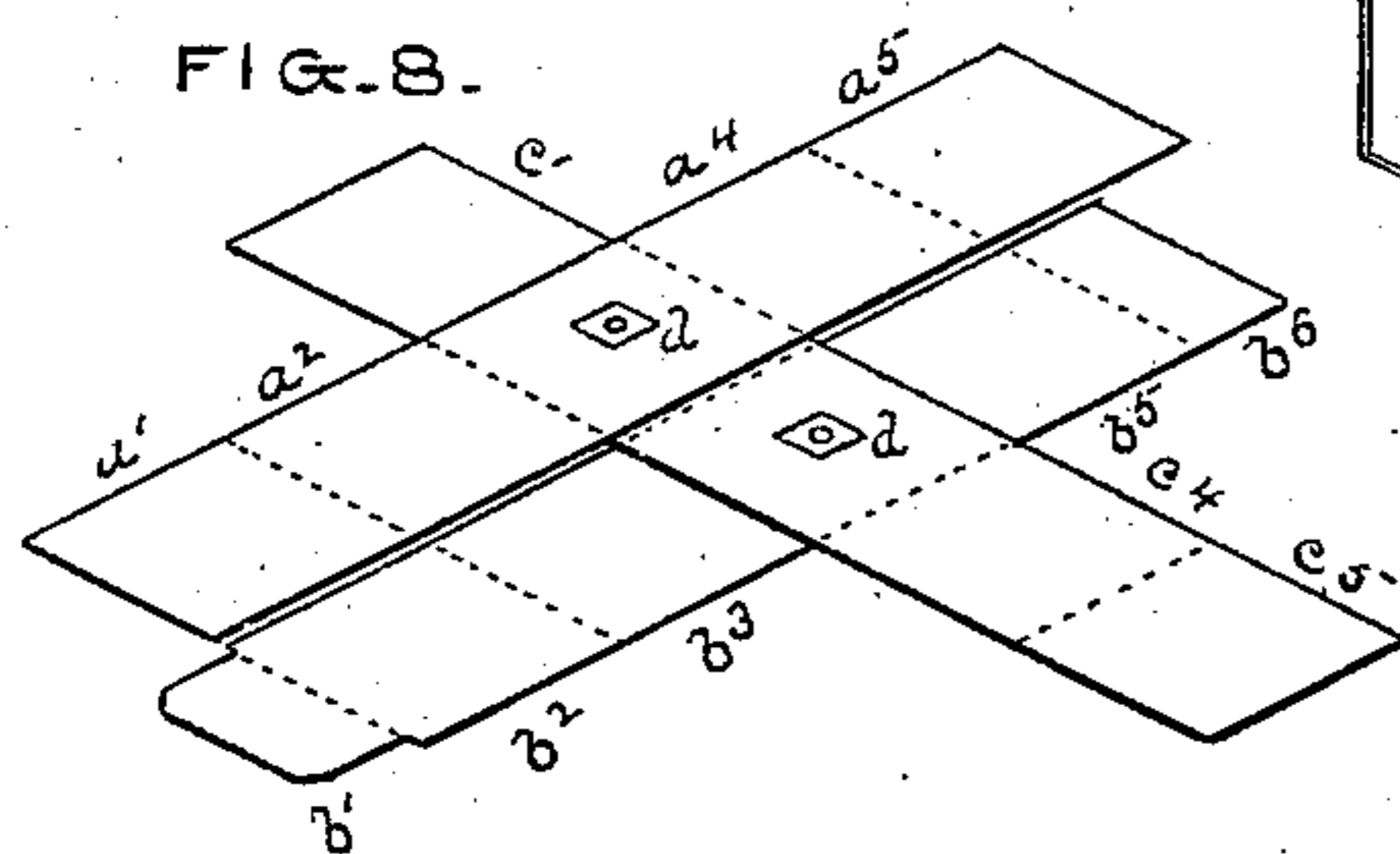
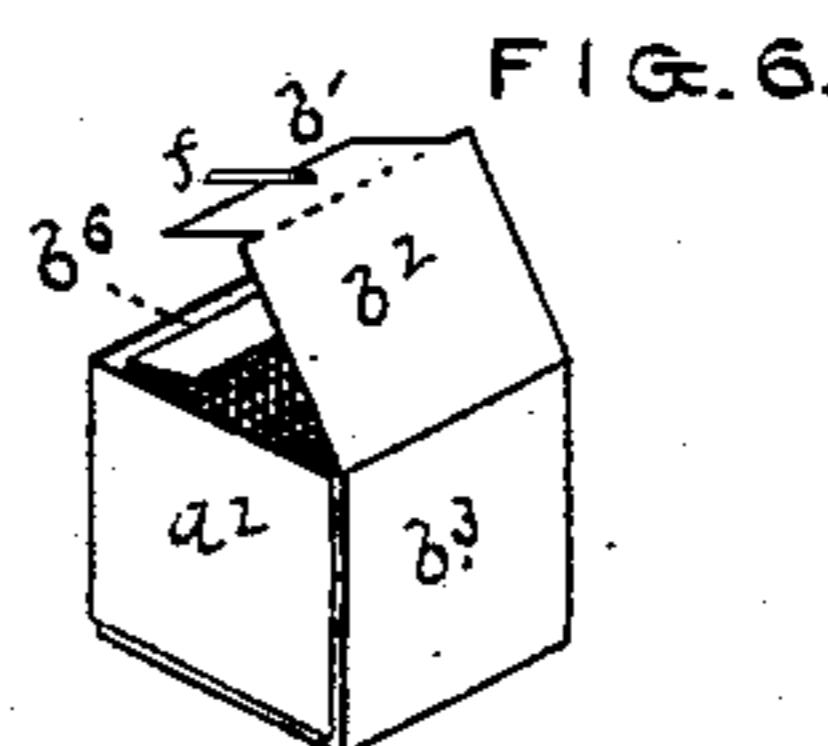
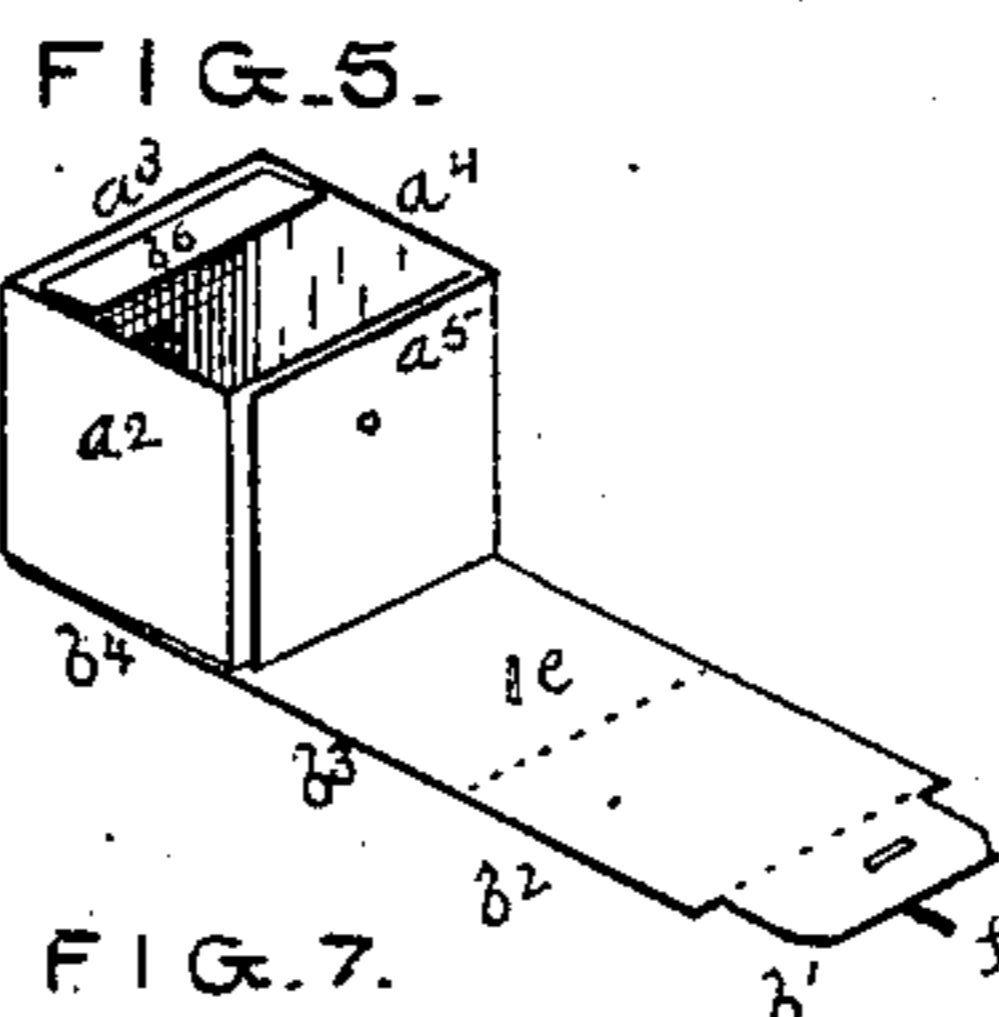
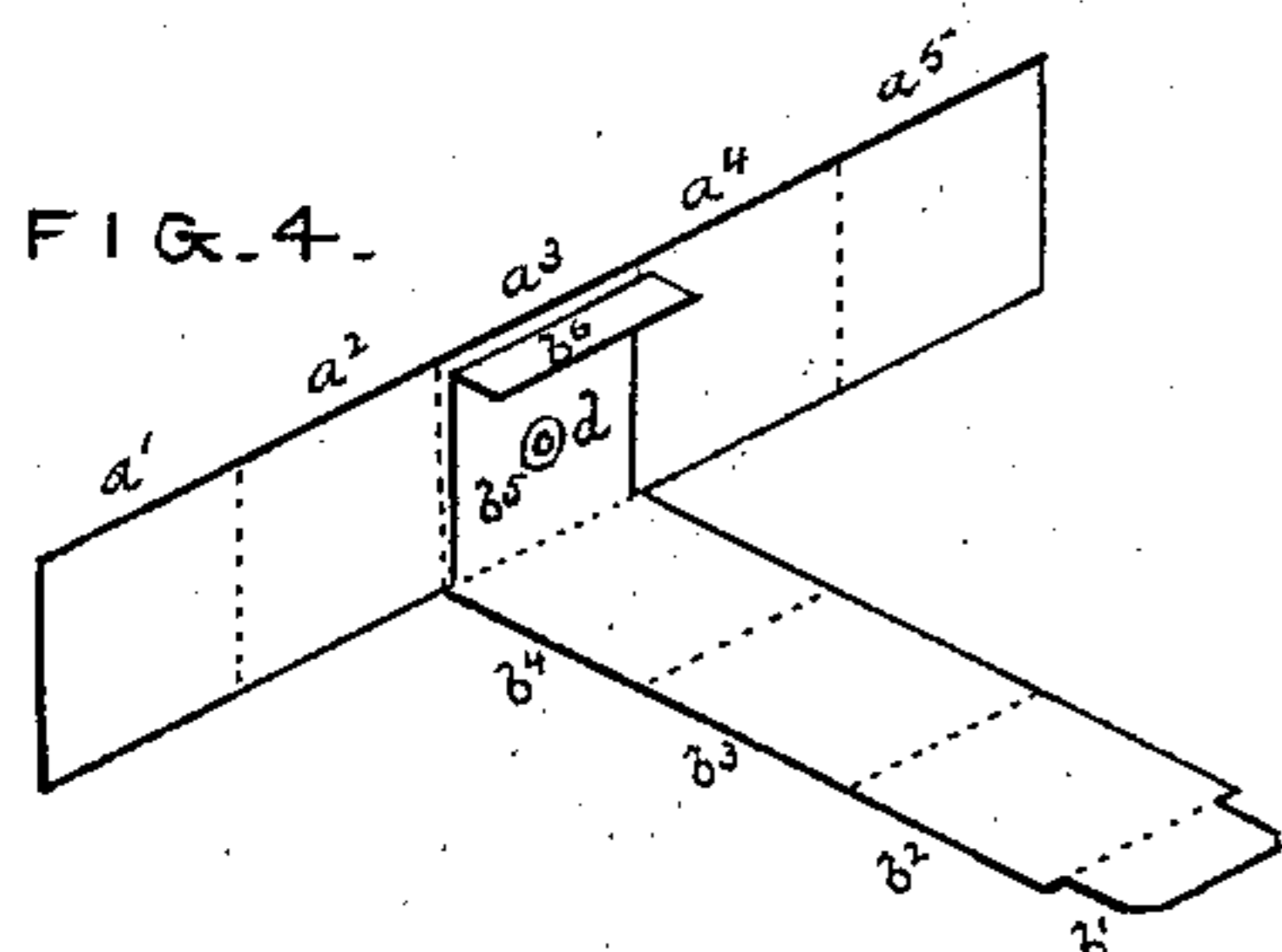
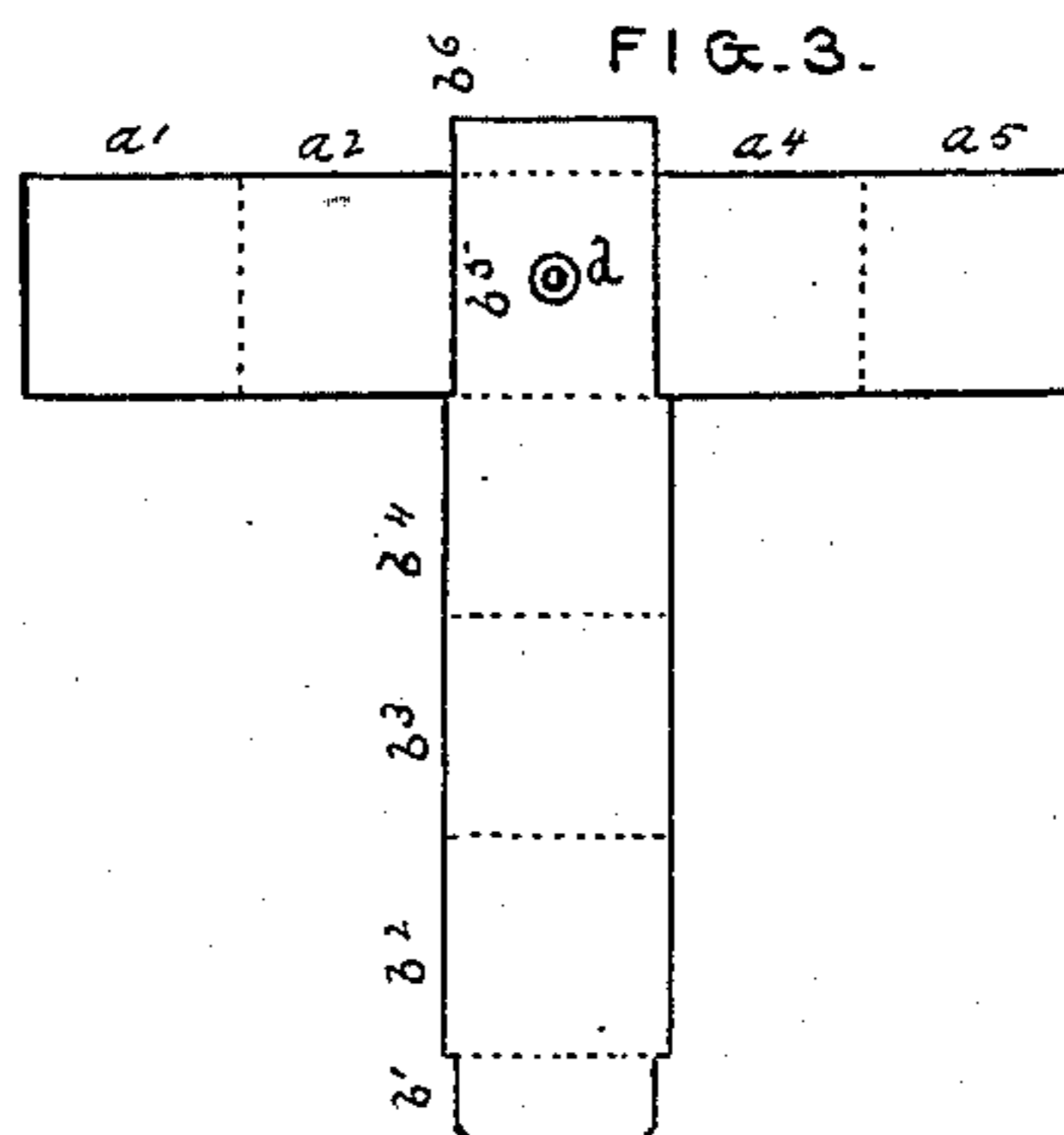
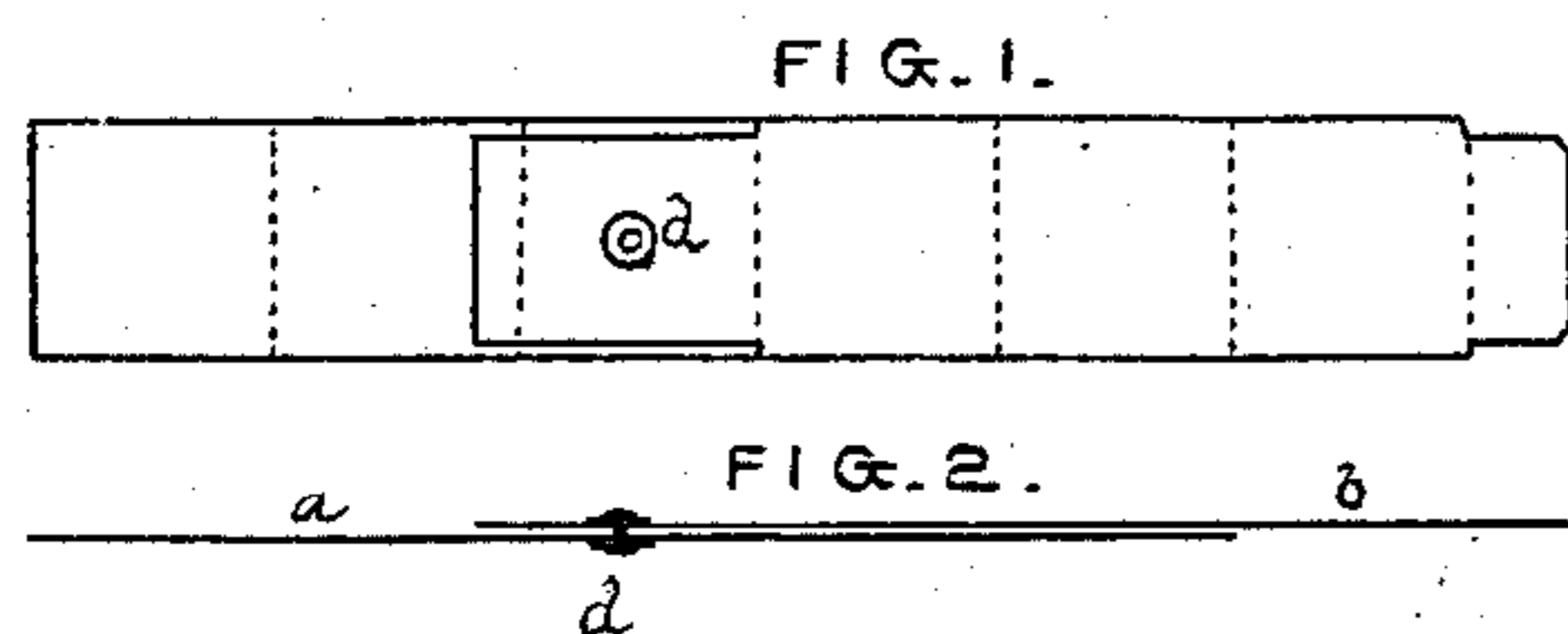
(No Model.)

S. FRIEND.

BOX.

No. 305,067.

Patented Sept. 16, 1884.



Witnesses.

John H. Warren

Bradford H. Duffer

Inventor.

SAMUEL FRIEND.

By L. P. Graham,
Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL FRIEND, OF DECATUR, ILLINOIS.

BOX.

SPECIFICATION forming part of Letters Patent No. 305,067, dated September 16, 1884.

Application filed June 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL FRIEND, a resident of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful Improvements in Boxes, of which the following is a specification.

My invention consists in an improvement in boxes, the construction and arrangement of which will be hereinafter fully set forth and specifically claimed.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan of a pair of strips properly creased and pivoted, and Fig. 2 is an edge view of the same. Figs. 3, 4, 5, 6, and 7 represent the consecutive steps in the formation of the box. In Fig. 8 a third strip is introduced, and that figure, together with Figs. 9, 10, and 11, show various steps in the process of forming a three-strip box. Fig. 12 represents a box closed and secured by circumscribing bands made, preferably, of the same material as the box. Fig. 13 represents a large box provided with handles for convenience in carrying it.

The strips are made sufficiently wide to form the sides of the box, and are creased at the proper positions for folding.

In forming a box of two strips, the first step in the construction is to arrange the strips at right angles, as shown in Fig. 3. The second step in the construction is shown in Fig. 4, and consists in turning the entire strip a and the divisions b^5 and b^6 into a vertical position, and in turning down division b^6 , as shown. In Fig. 5 the construction is shown as further advanced by folding divisions a' , a^2 , a^4 , and a^5 , so as to form the sides of the box. In Fig. 6 the box is shown as completed, ready for closing, and this result is effected by carrying b^3 into a vertical position against a^5 . The box is closed by pressing b^2 into a horizontal position, and at the same time passing b' between a^3 and b^5 . Division b^6 acts as a guide to assist flap b' in passing between a^3 and b^5 . Pin e is attached to division b^3 , and is used to secure

the same to the overlapping divisions $a^4 a^5$ by being first passed through said $a^4 a^5$, and then bent to one side. Pin f is attached to flap b , and is used to secure the box closed by being passed through division a^3 , and afterward bent to one side to prevent displacement. In Figs. 8, 9, 10, and 11 a third strip, c , is introduced, which extends around the box, as indicated, thereby giving additional strength to the same.

To give additional strength to boxes of large size, strips g may be attached, as shown in Figs. 12 and 13, and handles may be attached when desired, as shown in Fig. 13. It is obvious that additional strips $a b c$ may be used to make exceedingly strong boxes; but in all ordinary cases two, or at the most three, strips will be sufficient.

I prefer to use wood veneering in the construction of the strips; but paper or other material may be substituted therefor.

In the drawings the strips are shown all of the same width; but strips of varying width may be used whenever it is desired to have the box oblong in form.

The bands g are to be secured to the box by means of tacks or their equivalent, and the handles will be riveted to the bands.

I claim as new and desire to secure by Letters Patent—

1. The "knockdown" box herein described, consisting of side pieces, $a' a^2 a^3 a^4 a^5 b^2 b^3 b^4 b^5$, guide-flap b^6 , and securing-flap b' , as and for the purpose set forth.

2. The combination, in a knockdown box, of divisions $a' a^2 a^3 a^4 a^5 b^2 b^3 b^4 b^5 b^6 b'$, pin e , attached to division b^3 , and pin f , attached to division b' , as and for the purpose set forth.

3. The combination, with box $a' a^2 a^3 a^4 a^5 b' b^2 b^3 b^4 b^5 b^6$, of strengthening-bands g and handles h , as and for the purpose set forth.

SAMUEL FRIEND.

Witnesses:

C. C. CLARK,
L. P. GRAHAM.