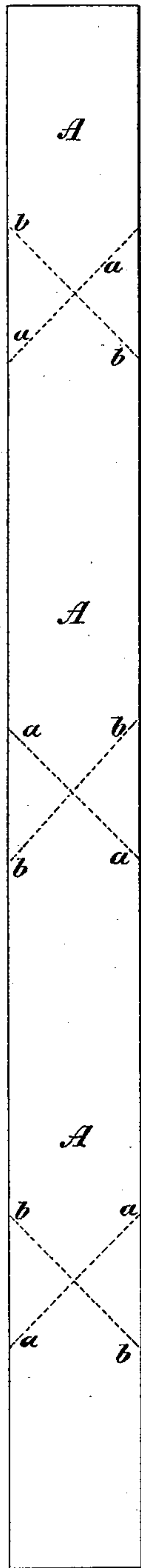


(Model.)

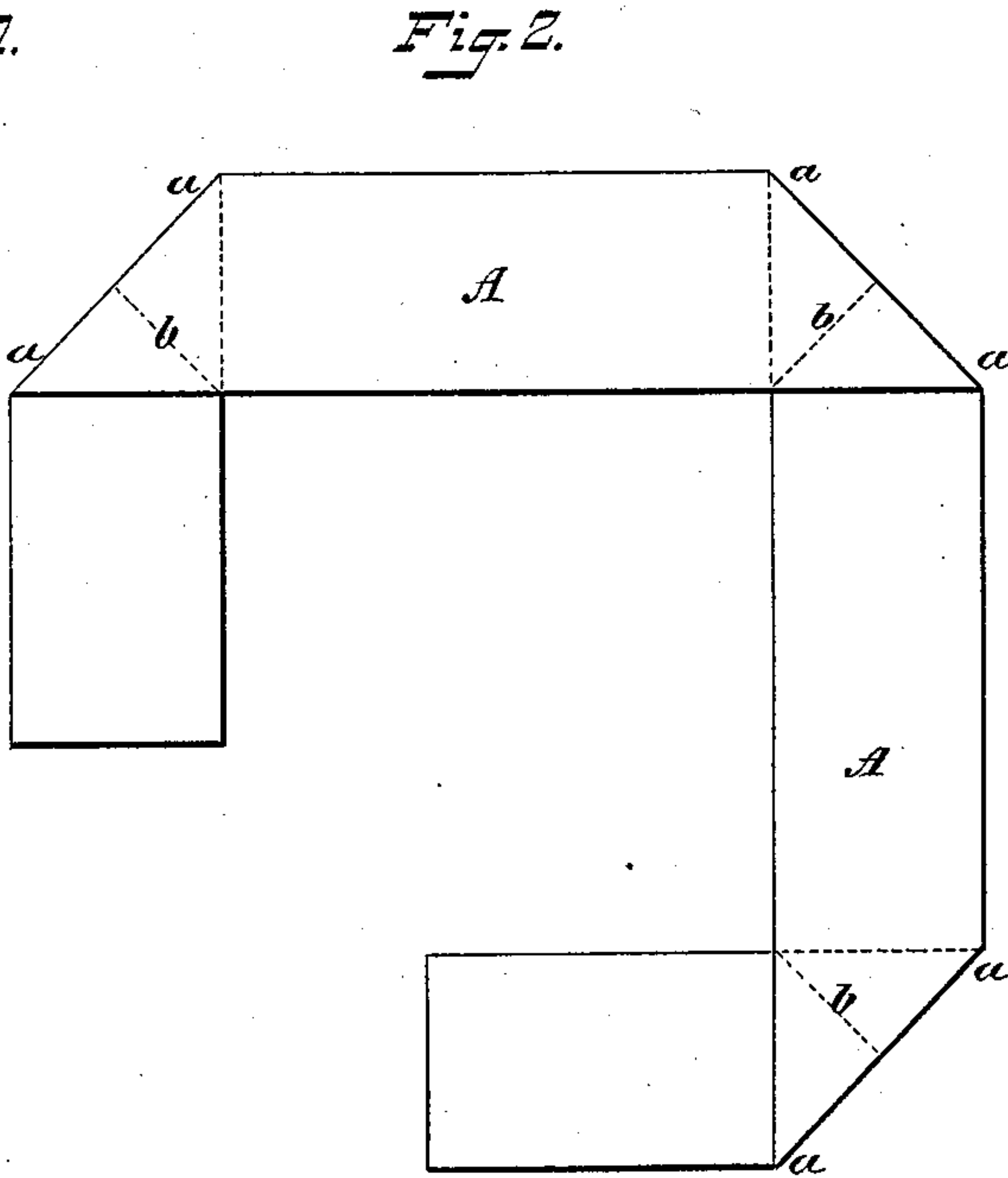
F. G. JOHNSON.  
METALLIC BOX BINDER.

No. 404,842.

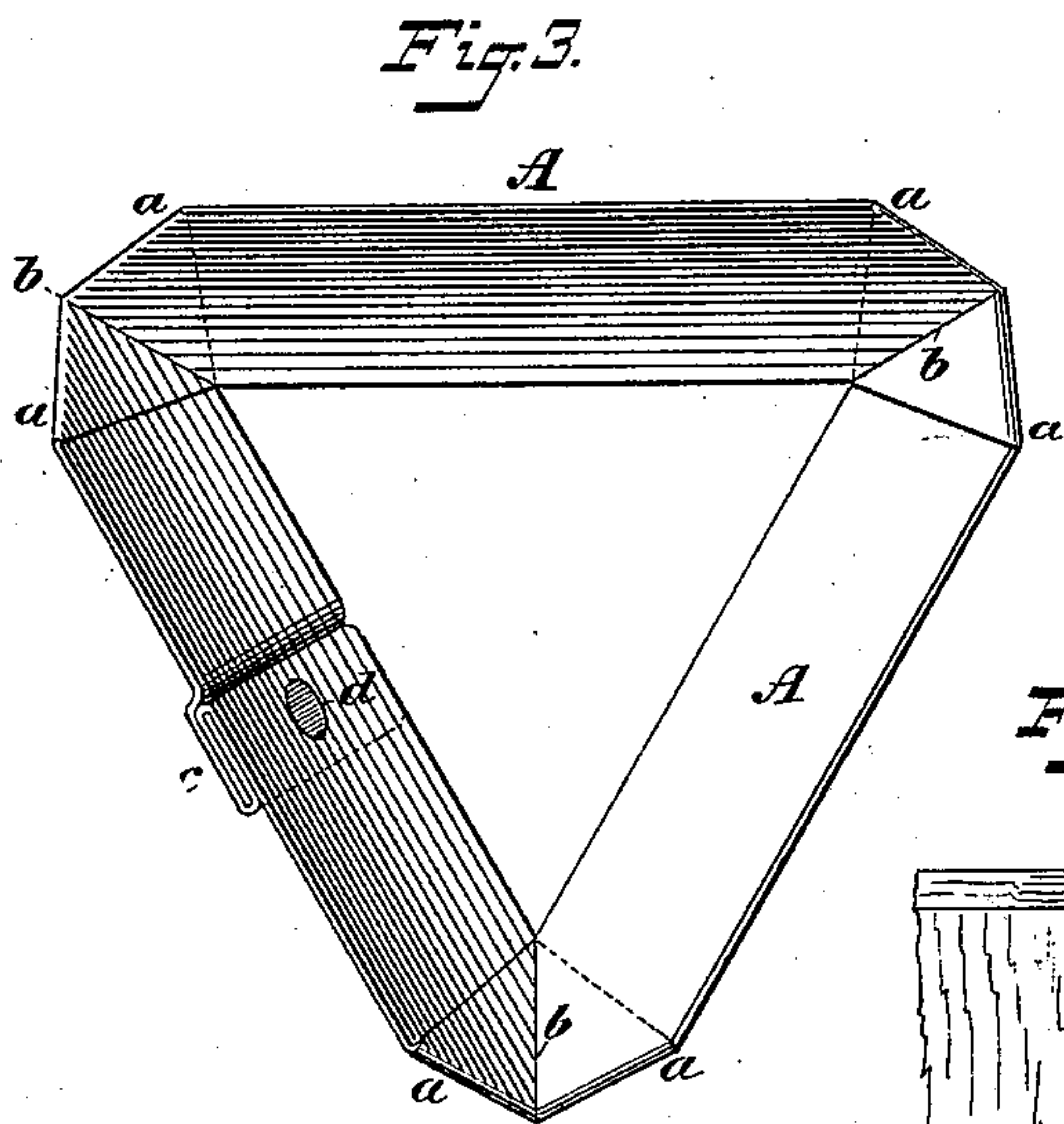
Patented June 11, 1889.



*Fig. 1.*

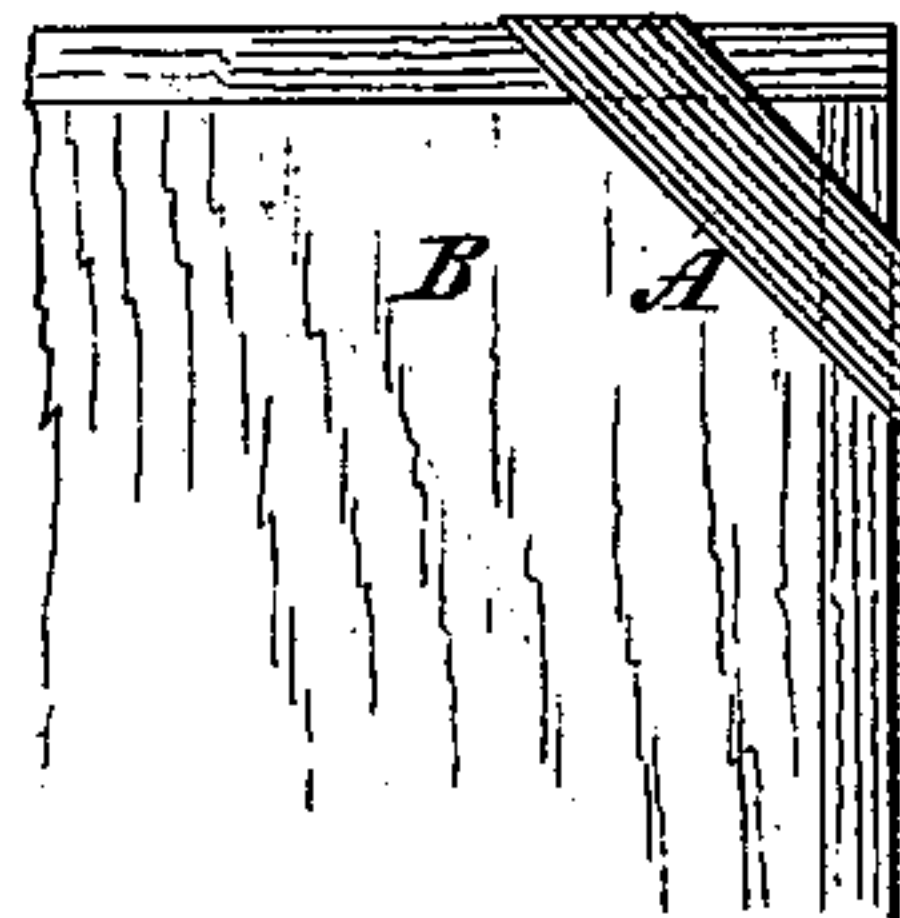


*Fig. 2.*



*Fig. 3.*

*Fig. 4.*



WITNESSES:

*Guillaume Dietrich*  
*W. T. B. Melliken*

INVENTOR

*Frank G. Johnson*

# UNITED STATES PATENT OFFICE.

FRANK G. JOHNSON, OF NEW YORK, N. Y.

## METALLIC BOX-BINDER.

SPECIFICATION forming part of Letters Patent No. 404,842, dated June 11, 1889.

Application filed October 16, 1888. Serial No. 288,255. (Model.)

*To all whom it may concern:*

Be it known that I, FRANK G. JOHNSON, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Metallic Box-Binder, of which the following is a specification.

The object of my invention is to provide a box-binder for securing the corners of packing-boxes, which can be cheaply and conveniently applied by unskilled labor.

The construction of my binder is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a strip of sheet metal of which the binder is made, which may vary in length, width, and thickness according to the character of the boxes to which the binders are to be applied. Fig. 2 shows the said strip as it is first bent in the process of making the binder, being bent three times at right angles to and upon itself on the diagonal lines *aa aa aa*. Fig. 3 shows the binder in a completed form, being further bent on the three converging lines *b b b*, and the two ends of the strip fastened together. Fig. 4 represents the binder fastened to a box B, as it appears when in use.

Similar letters refer to similar parts throughout the several views.

A is a strip of sheet metal, similar to ordinary light-weight hoop-iron. This strip, in the process of making my binder, is first bent three times at suitable intervals over, upon, and at right angles to itself on the three dotted diagonal lines *aa aa aa*, which brings the said strip into the form shown by Fig. 2,

and in which condition all parts of the strip fall in a common plane. Taken in this form, as in Fig. 2, the strip is further bent at right angles on the three cross-lines *b b b*, which said lines are perpendicular to the lines *aa aa aa*. By this operation the two ends of the strip will meet, and if long enough will lap upon each other, and the three sides will stand at right angles to and incline toward each other, as shown in Fig. 3; or, in other words, the three sides form the surface of a frustum of an equilateral triangular pyramid and lie in planes which are at right angles to each other. The binder is now completed simply by fastening the two ends together with the rivet *d*, the said strip being cut and the ends left long enough to lap upon each other. The ends can be left sufficiently long to be bent and turned back upon themselves and hooked together before they are riveted, as shown at *c*, Fig. 3.

My binder thus made fits upon the corners of any and every box having right angles.

What I claim as new and useful, and desire to secure by Letters Patent, is—

A box-binder consisting of a single flat strip of sheet metal A, bent on the three diagonal lines *aa aa aa* and on the three cross-lines *b b b*, having three sides at right angles to and inclined toward each other, and having the two ends of the said strip fastened together, as and for the purpose set forth.

FRANK G. JOHNSON.

Witnesses:

HUNTINGTON PAGE,  
JOHN T. ZABRISKIE.