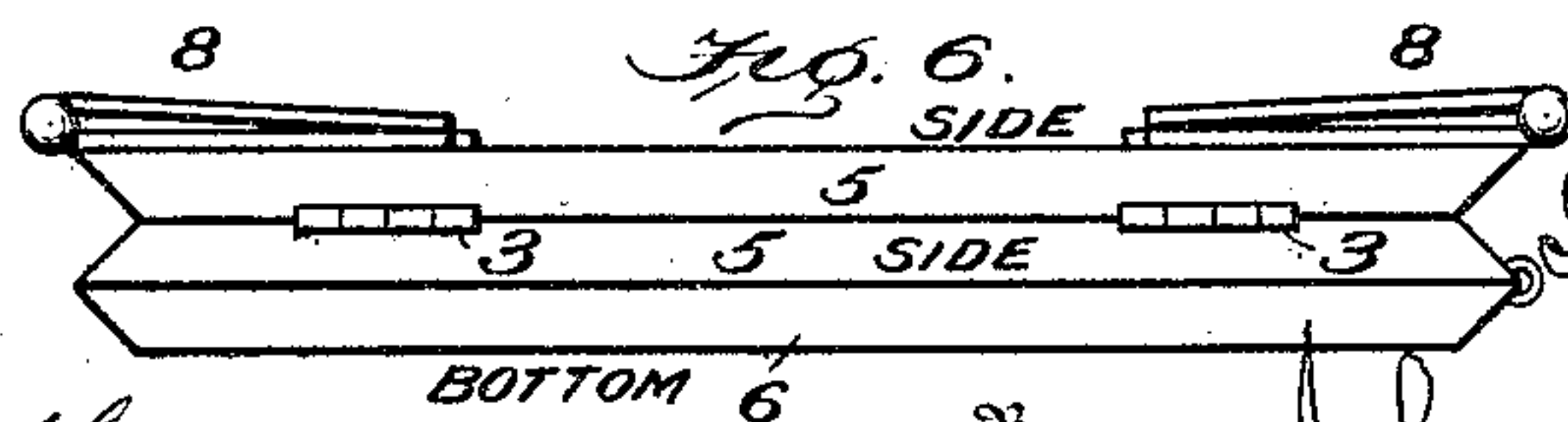
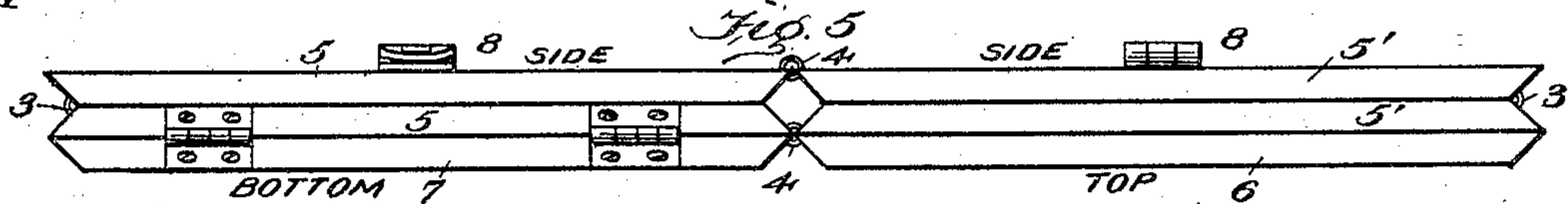
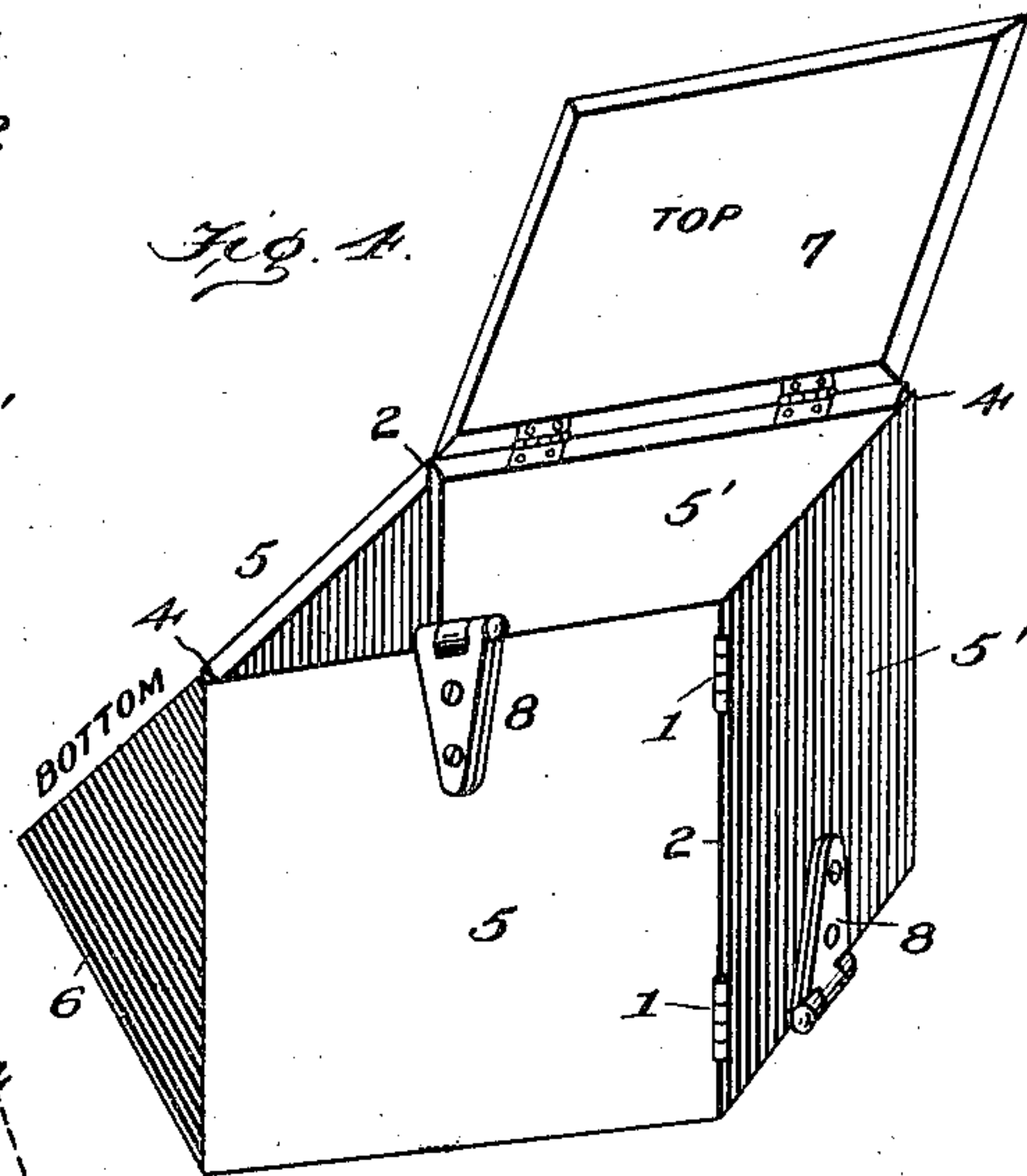
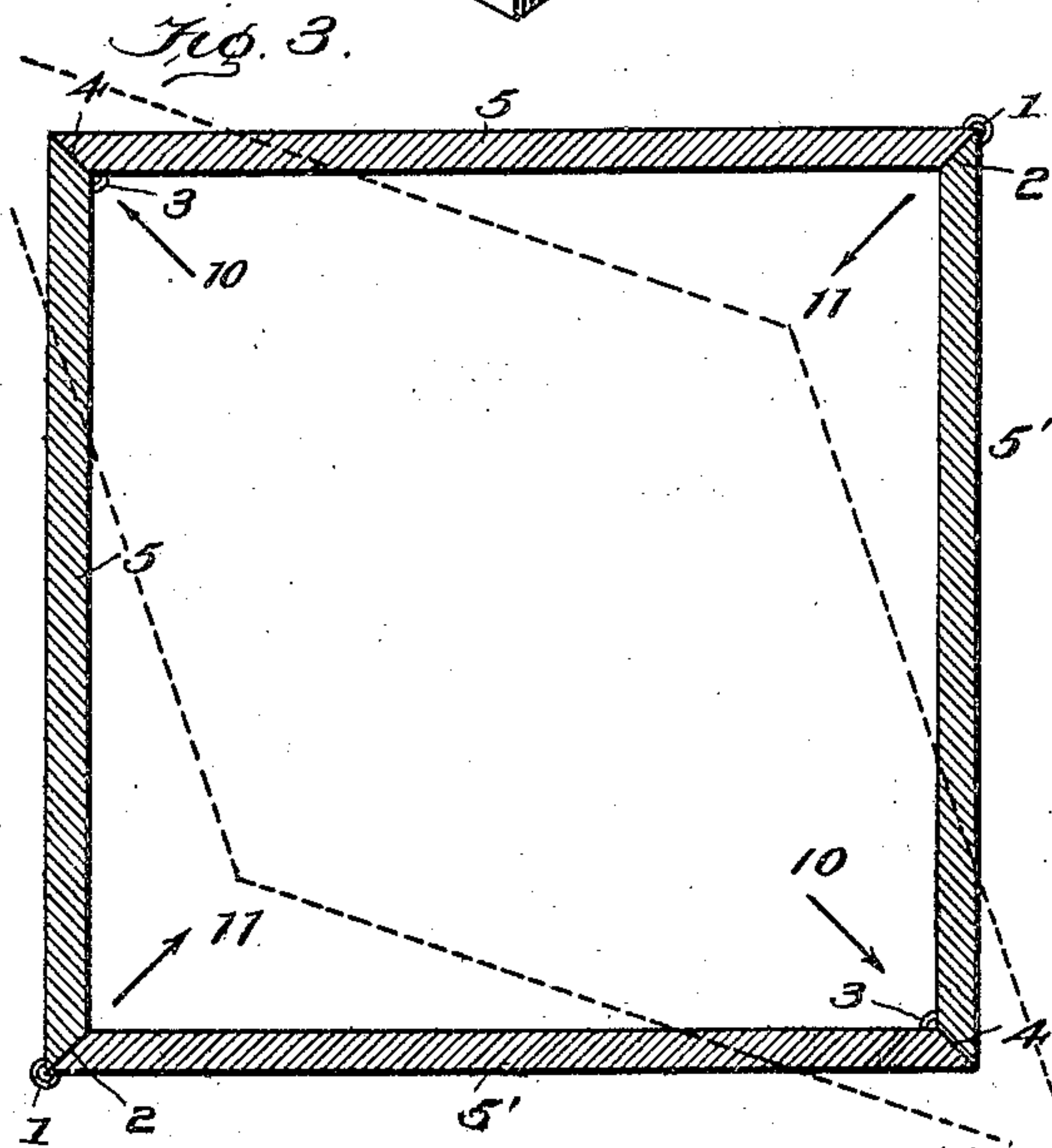
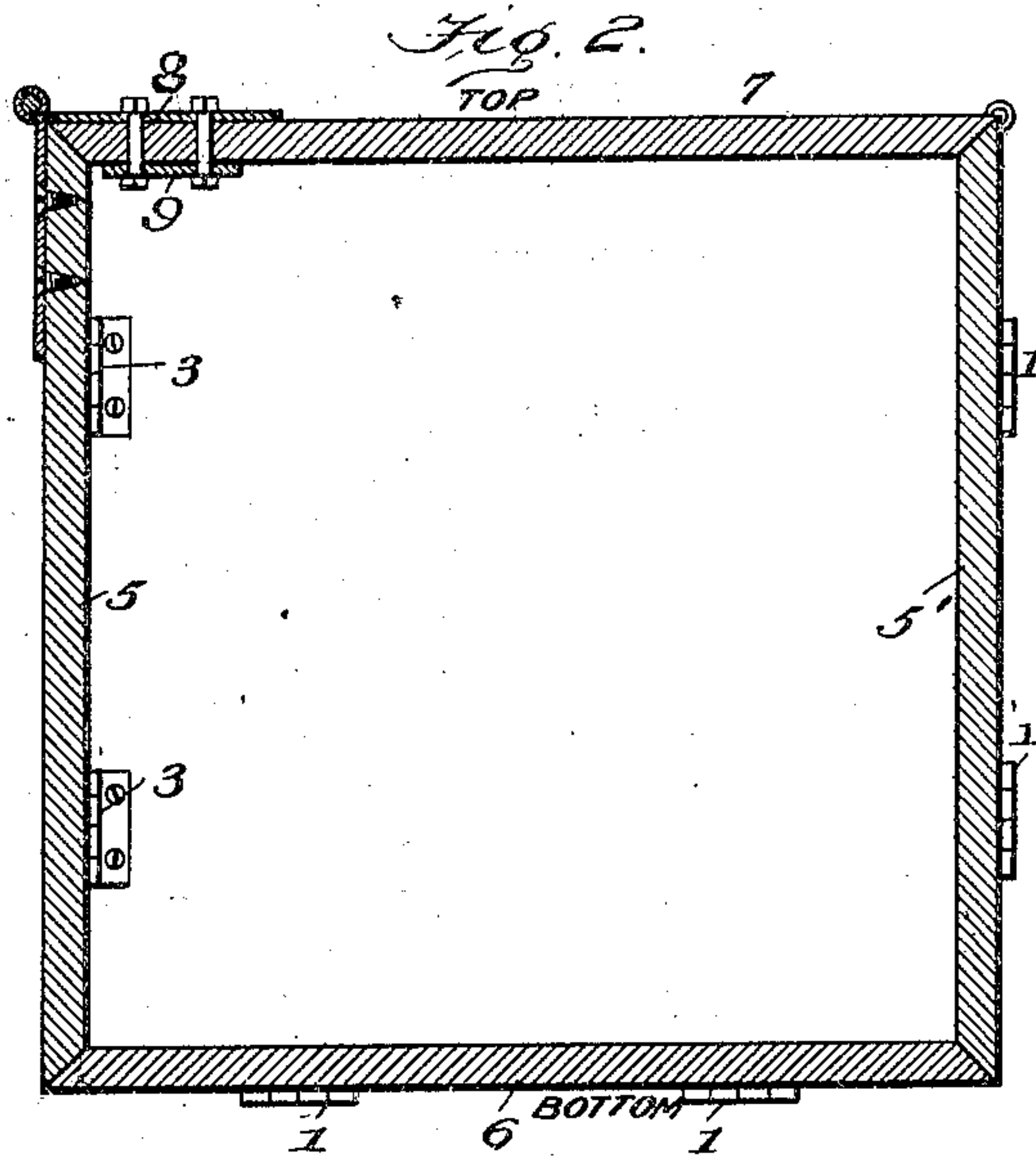
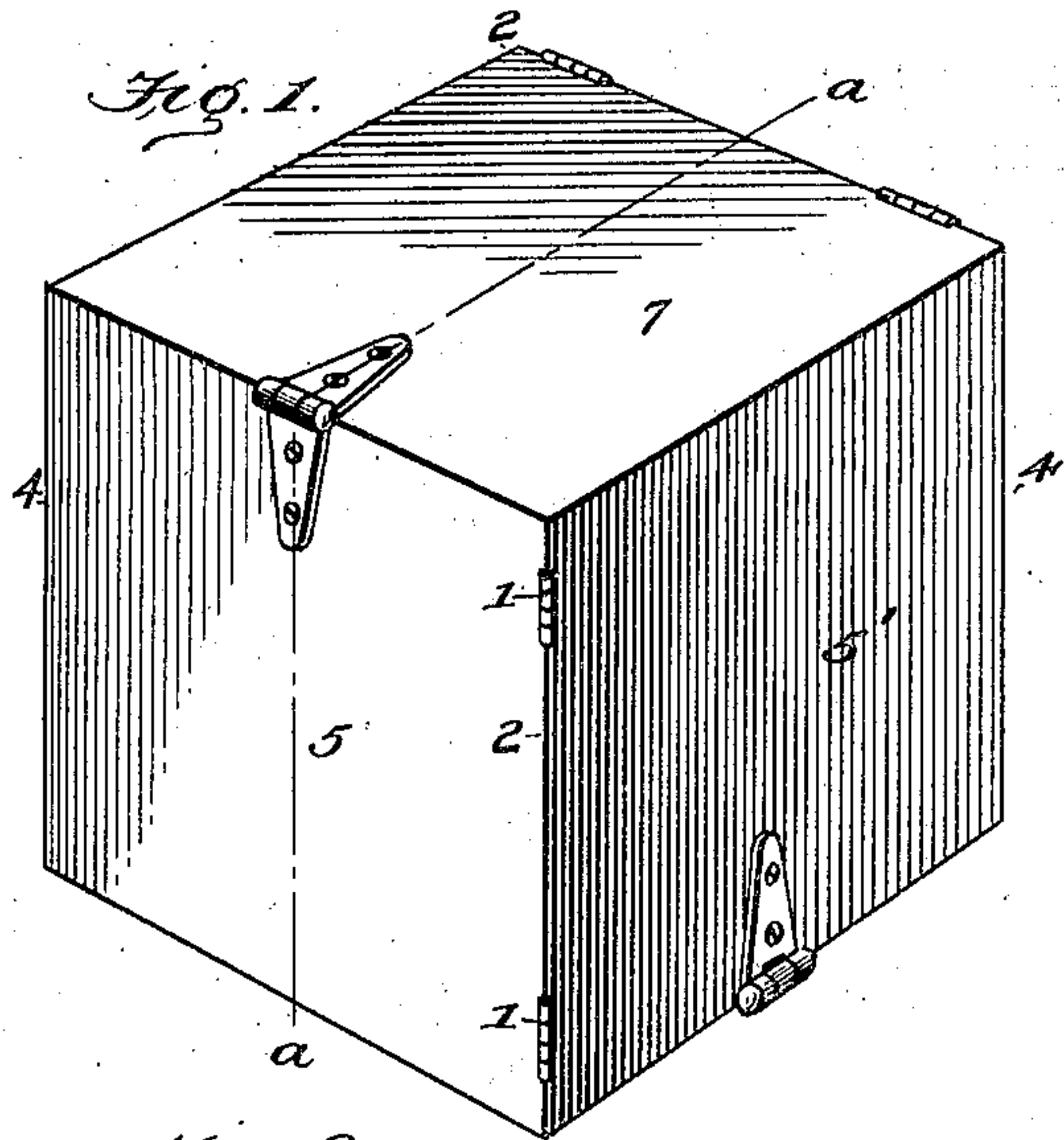


No. 770,138.

PATENTED SEPT. 13, 1904.

S. G. WILLIAMS.
FOLDING BOX OR CRATE.
APPLICATION FILED JAN. 25, 1904.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

SIDNEY GEORGE WILLIAMS, OF SHARON, PENNSYLVANIA.

FOLDING BOX OR CRATE.

SPECIFICATION forming part of Letters Patent No. 770,138, dated September 13, 1904.

Application filed January 25, 1904. Serial No. 190,504. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY GEORGE WILLIAMS, a citizen of the United States, residing at Sharon, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Folding Boxes or Crates; 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.

In producing a folding box or crate for transporting merchantable articles I have provided a construction in which all the parts are joined by miter-joints and in which external fastenings are applied to the hinged top and bottom to cause them to be forced inward by a conical expanding or wedge action against the beveled top and bottom edges, driving them out, and thereby firmly brace all the hinged sides, making the box strong and rigid and the top and bottom rendered self-seating.

Referring to the drawings, Figure 1 shows the box closed as in use. Fig. 2 is a vertical section of the same on the line *a a* of Fig. 1. Fig. 3 is a horizontal section showing the inside and outside hinges of the miter-joints. Fig. 4 shows the box with its sides in position to be laterally folded, its top and bottom having been opened. Fig. 5 is an edge view of the box when folded. Fig. 6 is an end view of the same.

The edges of all the parts of the box are beveled and are hinged together, so as to form miter-joints. The knuckles of the hinges 1 of the opposite diagonal miter edges 2 2 are at the outside corners, and the knuckles of the hinges 3 3 of the other opposite diagonal miter edges 4 4 are at the inside corners, and it is this diagonal inside and outside arrangement of the hinges that allows the sides 5 to be folded by laterally moving them toward each other. In opening the sides to form the closure the beveled edges close at the right-angled positions of the sides, as in Fig. 3, and form the miter-joints, the arrangement of the hinges of which prevent the opening movement of the sides beyond their right-angled relation. While the vertical edges of the sides

are beveled to form miter-joints, as seen in Fig. 3, the sides are also beveled on their horizontal edges, and the edges of the top and bottom are also beveled to form miter-joints with the horizontal beveled edges of the sides, as seen in Fig. 2, so that all the parts of the box are closed in by miter-joints. The bottom 6 is hinged to be folded upward against the outer side, as shown in Fig. 4, while the top 7 is hinged to be folded downward against the outer side, and it is this arrangement of the hinges of the top and bottom that allows them to be folded with the lateral folding of the sides of the box. It will be noted that the upper and lower edges of the sides are inwardly beveled, that the top and bottom are hinged to fold over the said beveled edges, that the latter are expanded to form the opened box, and that the top and bottom have beveled edges corresponding to the bevel of the edges of the vertical sides whereby said top and bottom automatically completely expand the box and are self-seating. When the box is closed, the miter joining of the top and the bottom form braces to the hinged sides against closing and prevent undue strain on the hinges, and as the top and bottom are hinged on opposite sides of the box the bracing of the box is rendered uniform on its sides, top, and bottom, as in Figs. 2 and 3. This construction provides a conical or flaring seating at the edges of the top and bottom upon the conical or flaring edges of the vertical sides, and for fastening the top and bottom with an inward pressure, so as to expand the sides, I provide straps 8 8, hinged at the joint to the vertical wall and fastened down with a clasp-like action upon the outer side of the free edge of the top and bottom, driving them inward and forcing the sides out, rendering the joints tight and giving firmness to the box. These hinged plates are at right angles to each other, and the screws for fastening them may engage a plate 9 on the under side of the free edge of the top and bottom, as seen in Fig. 2.

I claim—

A collapsible and expandible packing-box having its sides hinged together at mitered joints and formed with top and bottom in-

wardly-beveled edges, and top and bottom covers each having its edges inwardly beveled, means connected to one side of the box for fastening the top cover with a downward
5 pressure to expand the sides at their upper edges, and means connected to another side for fastening the bottom with an upward pressure to expand the sides at their lower edges, whereby the sides are automatically

expanded at opposite sides of the box to render it rigid at its hinged mitered corner-joints. 10

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SIDNEY GEORGE WILLIAMS.

Witnesses:

CHARLES N. McCLURE,
MILES WILLIAMS.