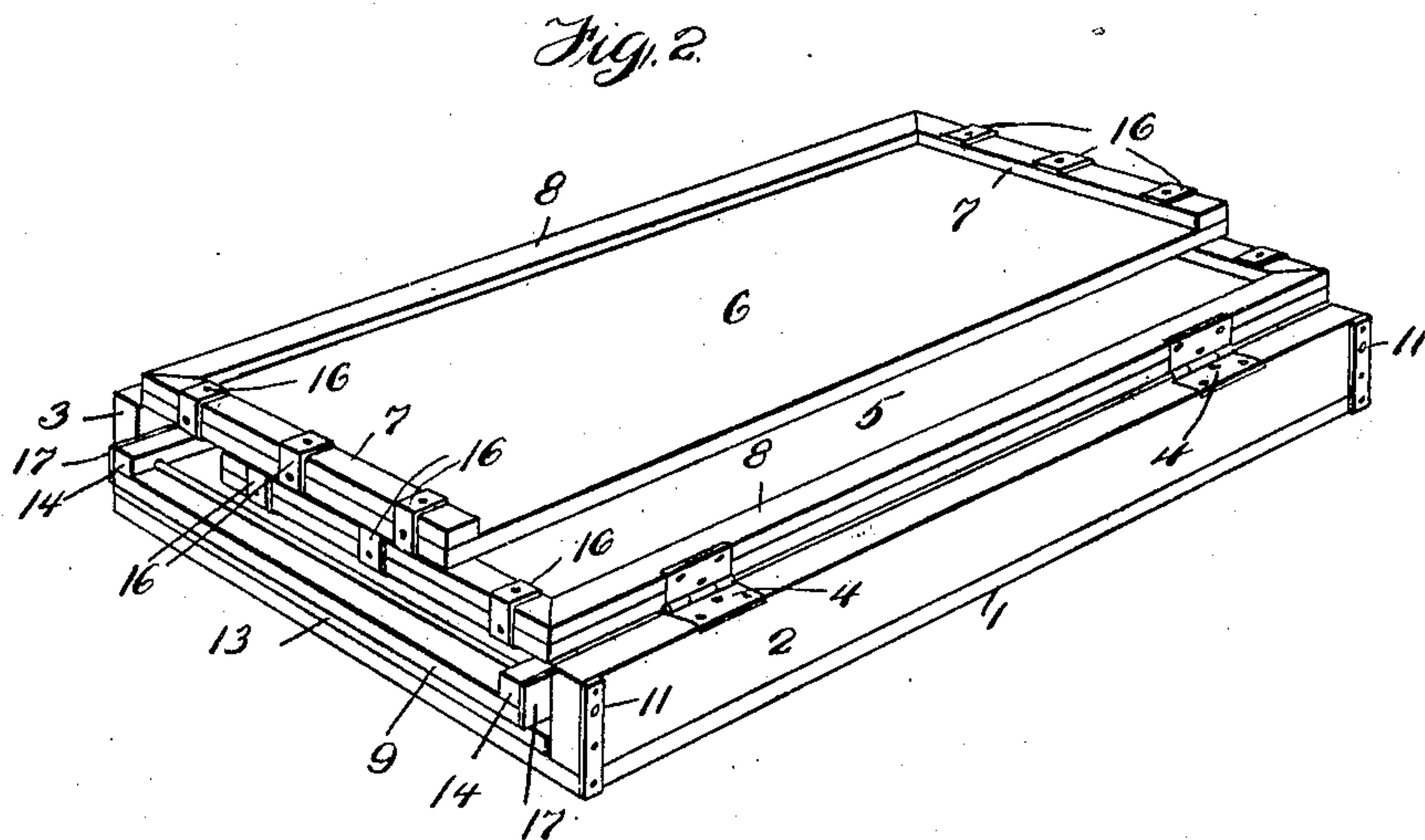
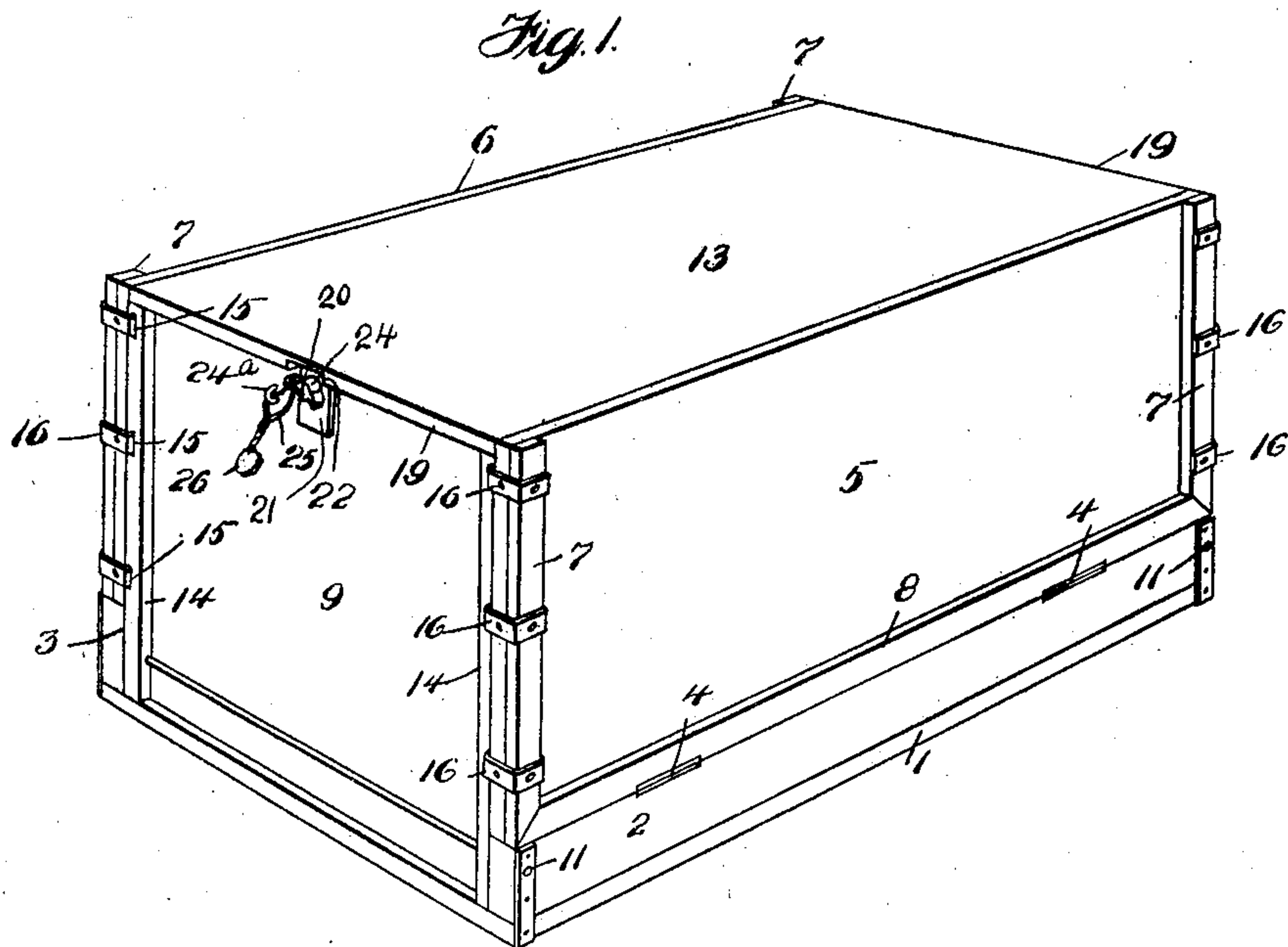


No. 891,082.

PATENTED JUNE 16, 1908.

J. A. LAMP.
FOLDING BOX OR CRATE.
APPLICATION FILED NOV. 14, 1907.

2 SHEETS—SHEET 1.



Inventor

J. A. Lamp.

Witnesses

Samuel Payne.
R. S. Butler.

By

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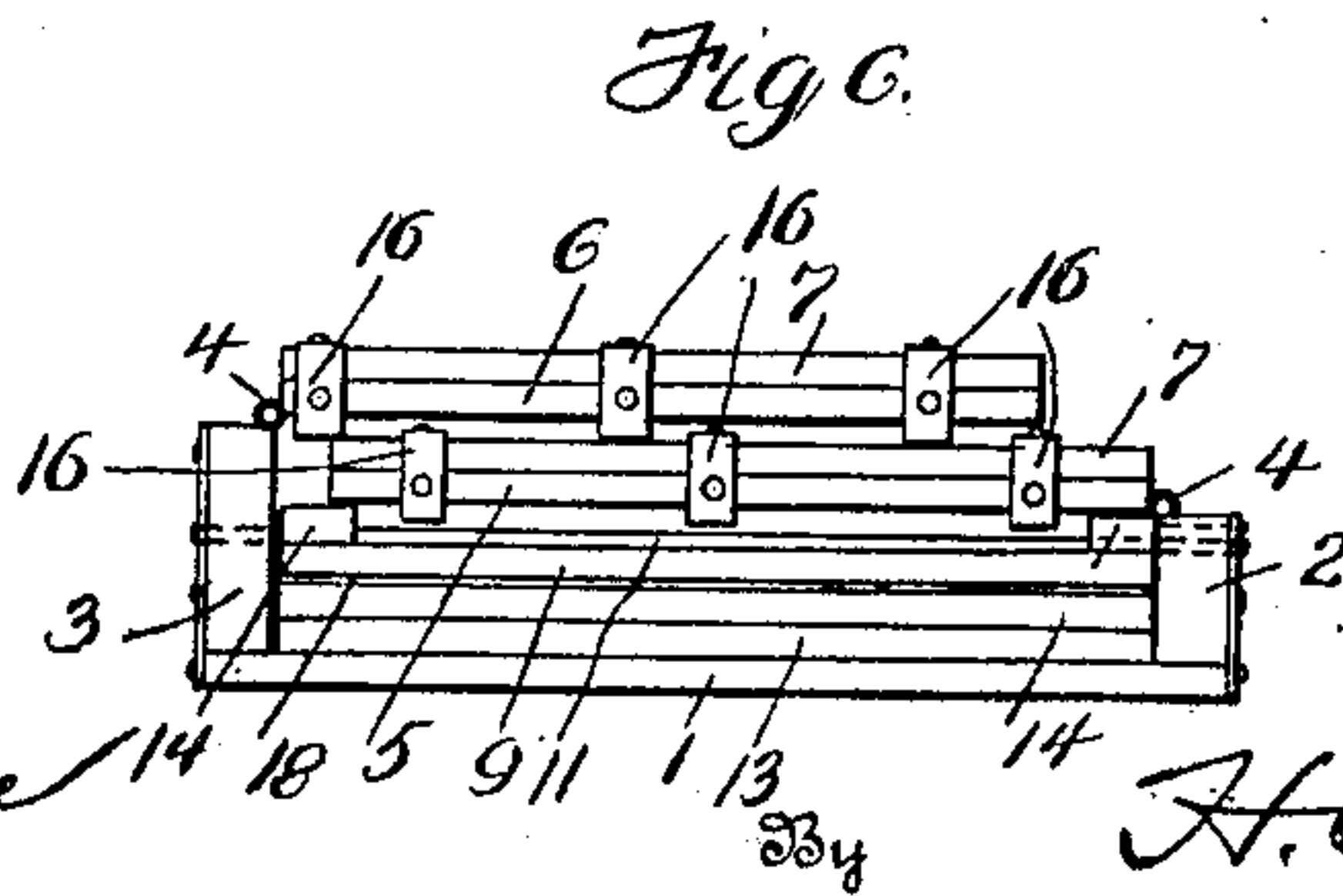
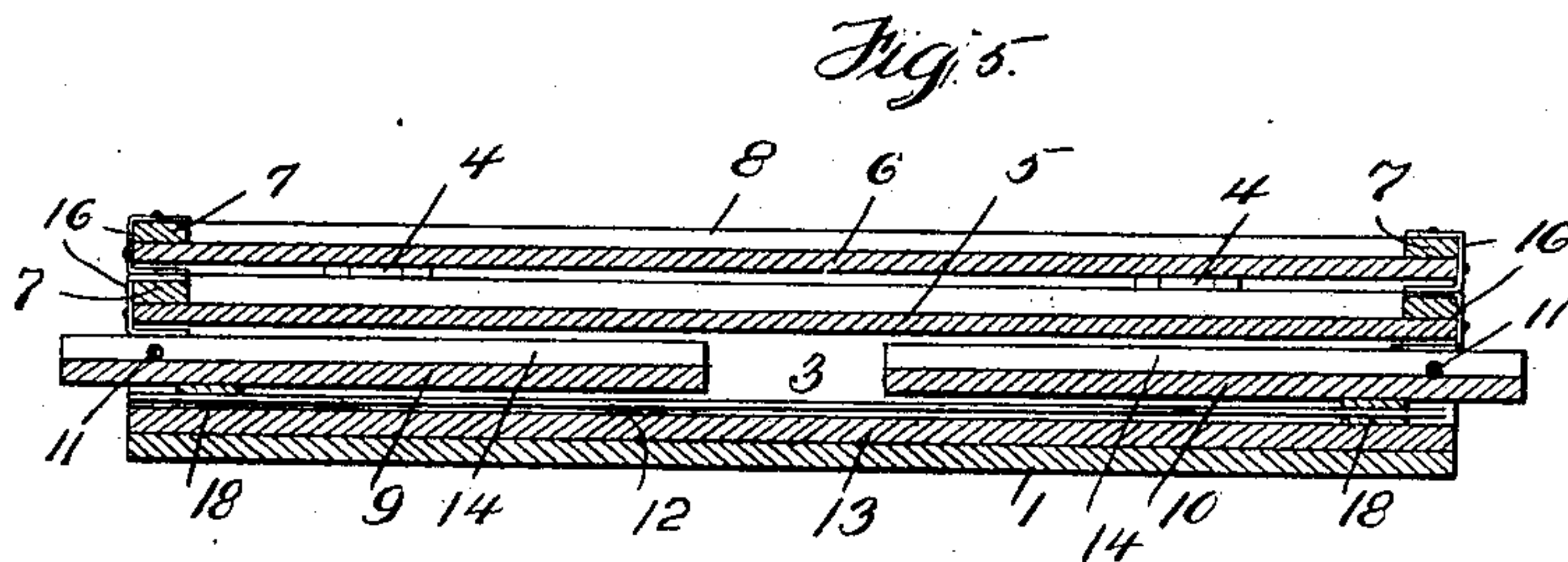
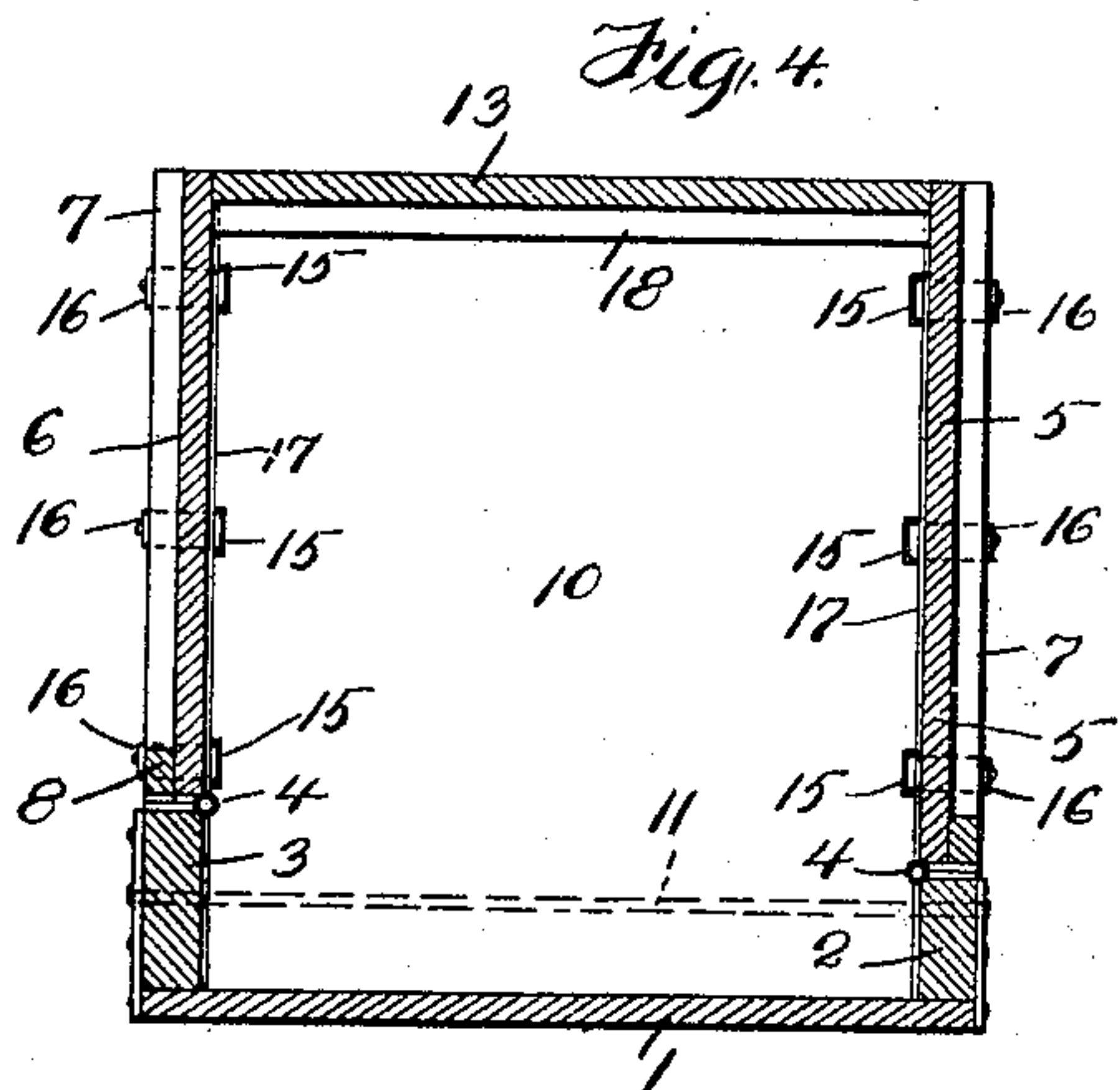
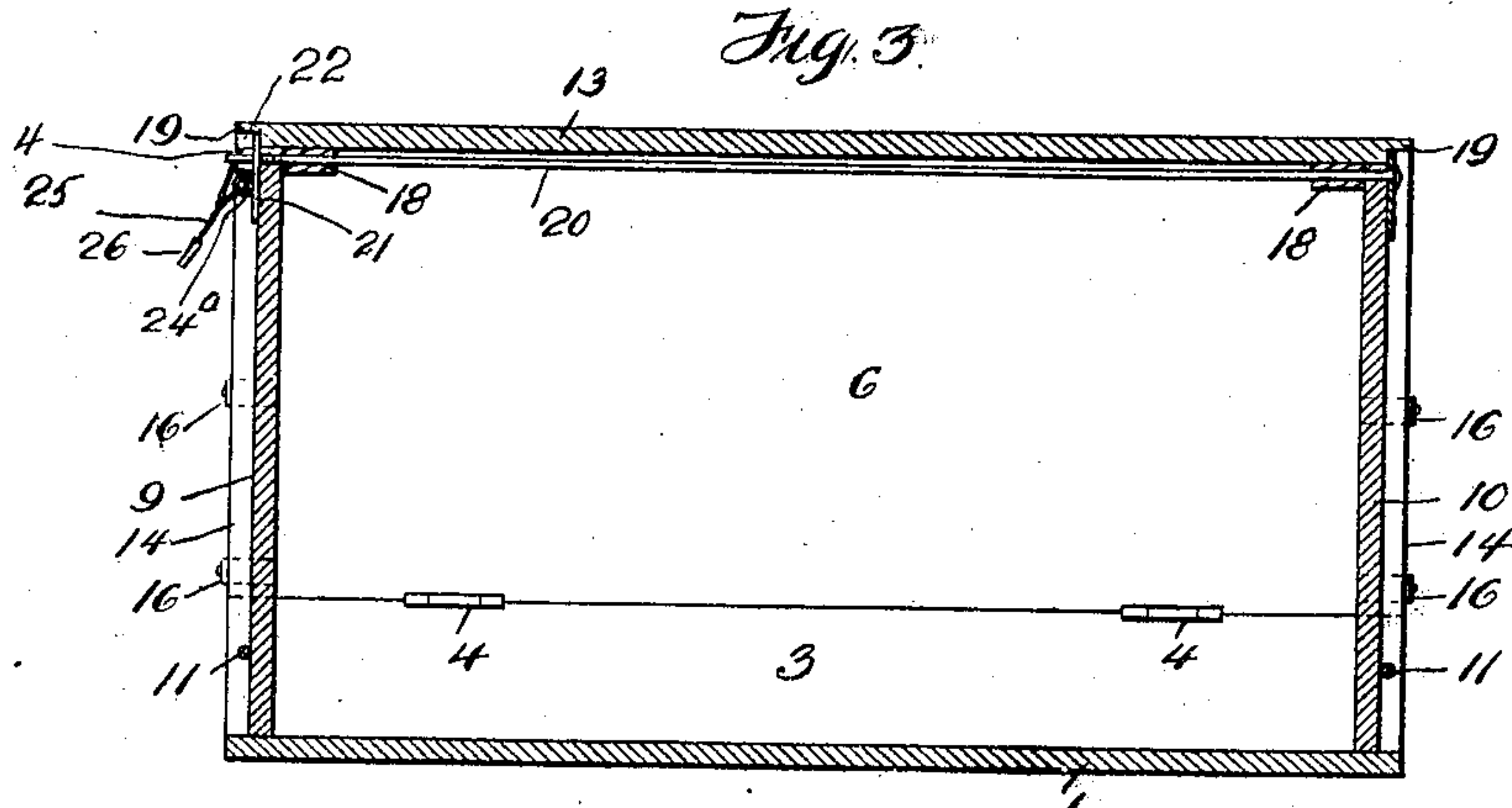
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOSEPH A. LAMP, OF McKEESPORT, PENNSYLVANIA.

FOLDING BOX OR CRATE.

No. 891,082.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed November 14, 1907. Serial No. 402,098.

To all whom it may concern:

Be it known that I, JOSEPH A. LAMP, a citizen of the United States, residing at McKeesport, in the county of Allegheny, Pennsylvania, have invented certain new and useful Improvements in Folding Boxes or Crates, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to folding boxes or crates, and its primary object is, to provide a box capable of being compactly folded when not required for use.

A further object of the invention is, to provide simple and effective means for connecting the ends of the box to the sides thereof when in unfolded position.

A still further object of the invention is, to provide novel means for securing the cover of the box in place.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and its novel features will be set forth in the appended claims.

In the drawing:—Figure 1 is a view in perspective of a box embodying the invention, in its unfolded position, Fig. 2 is a similar view showing the box folded for reshipment or storage, Fig. 3 is a longitudinal section of the box in unfolded position, Fig. 4 is a transverse section of the box in unfolded position, Fig. 5 is a longitudinal section of the box in folded position, and Fig. 6 is an end elevation of the same.

The reference numeral 1 designates the bottom of the box to which are secured longitudinal cleats 2 and 3, serving as portions of the sides. The cleat 2 is of less width than the opposite cleat 3 for the purpose hereinafter explained. To the upper edge of each of said cleats is secured by hinges 4 a side board designated by the reference numerals 5 and 6 respectively, the side 5 hinged to the cleat 2 being wider than the board 6, so that the upper edges of the two boards will be flush with each other. These side boards 5 and 6 are preferably reinforced at their ends by vertical strips 7 and at their lower edges by longitudinal strips 8.

The ends 9 and 10 of the box are pivotally secured between the cleats 2 and 3 by rods 11, the ends of which extend through said cleats and are riveted on the outer sides thereof. The pivot rods 11 are arranged above the lower edges of the ends 9 and 10,

so that when said ends are folded down upon the bottom 1, a space 12 is left between the ends and bottom to receive the cover 13. The ends 9 and 10 are reinforced at their side edges by vertical strips 14, and the outer edges of said strips 14, and the outer edges of the ends are formed with a plurality of recesses 15 to receive the inner ends of U-shaped catches 16, secured to the ends of the side boards 5 and 6 and their vertical strips 7. Metal straps 17 are secured to the outer edges of the ends 9 and 10, said straps covering the recesses 15 and being engaged by the inner ends of the catches 16 when the ends of the box are in vertical position. The under side of the cover 13 is provided adjacent to each of its ends with a transverse cleat 18, said cleat engaging the inner sides of the ends of the box to retain the cover in place.

The ends 9 and 10 of the box are provided with openings 20 adjacent to their upper edges, these openings being protected by pierced escutcheon plates 21 extending upwardly above the upper edges of the ends 9. The cover 12 has its ends cut away, as at 22, to clear the upper ends of the escutcheon plates.

To secure the cover at its ends, a tie rod 23 passes through the ends 9 and 10 and the cleats 18 of said cover. One end of the rod is secured by a winged nut 24, having one of its wings pierced. A staple 24^a is secured adjacent to the nut, whereby a locking wire 25 can be passed through said staple and through the pierced wing of the nut 24, and secured by a seal 26.

The unfolded position of the box is clear from the illustration in Figs. 1, 3 and 4, the ends and sides being turned up to vertical position and the ends engaged by the catches 16. The cover is held in place by the means described.

To fold the box into small compass, the cover is first removed, after which the ends 9 and 10 are turned inward to horizontal position as shown in Fig. 5. The cover is then inverted and slipped into the space 12 between the ends 9 and 10 and the bottom 1. The side board 5 is then folded down upon the ends 9 and 10, and finally the side board 6 is folded upon the board 5, the elevation of the upper edge of the cleat 3 above that of the cleat 2 permitting the side board 6 to rest snugly upon the board 5 as shown.

Should the box be of such dimensions that the ends 9 and 10 must overlap, it will, of

course, be understood that the sides of the box will be hinged to clear the overlapping ends thereof.

It will be apparent that the box when folded will occupy but little space, and that it may be readily folded or knocked down, and as easily unfolded, no separable or disconnected parts being employed.

Having now described my invention what I claim as new, is:—

1. In a folding box, the combination with a bottom, of longitudinal cleats of different width secured thereto, side boards also of different width hinged to said cleats, ends pivotally secured between said cleats at points above the lower edges of said ends, means comprising substantially U-shaped clips secured to the sides at the ends thereof for connecting said ends to the ends of the side boards, metal straps secured to the ends to receive said clips, a cover provided on its inner side with parallel cleats, means for securing said cover to the ends of the box comprising a tie rod adapted to pass through said cleats in the ends of said box, a pierced winged nut screwing upon one end of said

rod, a staple projecting from the end of the box adjacent to said nut, a locking wire extending through said staple and said pierced winged nut, and a seal for said wire.

2. In a folding box, a bottom, a pair of side walls arranged to fold inwardly upon said bottom, and a pair of end walls pivoted to fold inwardly upon the bottom, vertical strips secured to the outer faces of the side walls at the ends thereof, vertical strips secured to the outer faces of the end walls at the ends thereof, metal straps secured to the ends of said end walls and the strips thereon having notches, U-shaped clips connected to the vertical strips carried by the side walls adapted to engage in the notches in said end walls, a cover fitting on said end walls, a tie rod securing said cover to the end walls, and means for locking said tie rod in position.

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

JOSEPH A. LAMP.

Witnesses:

MAX A. SROLOVITZ,
C. A. RENZIEHAUSEN.