

No. 813,347.

PATENTED FEB. 20, 1906.

E. G. BROWN.
FOLDING BOX.

APPLICATION FILED APR. 27, 1905.

2 SHEETS—SHEET 1.

Fig. 1

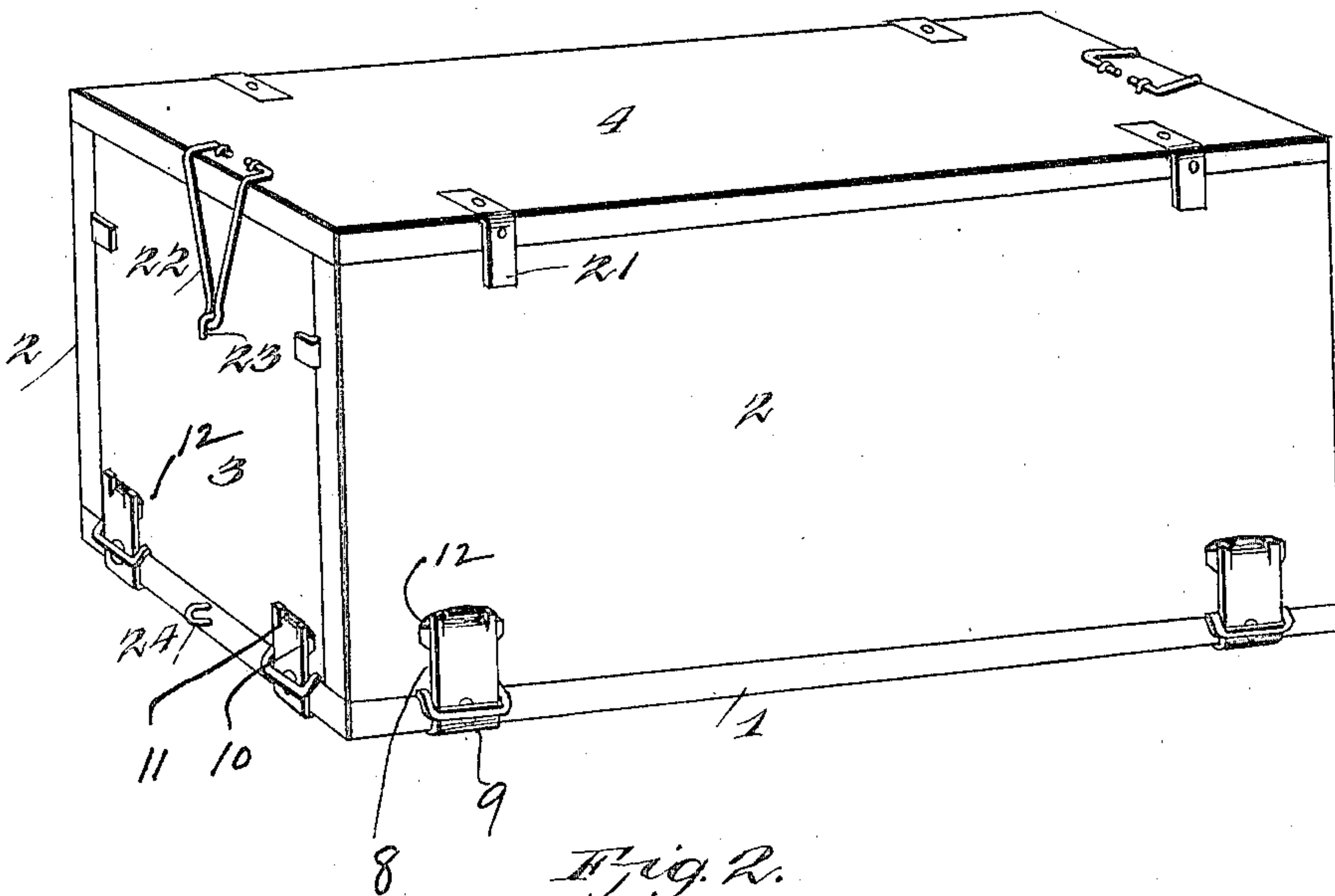
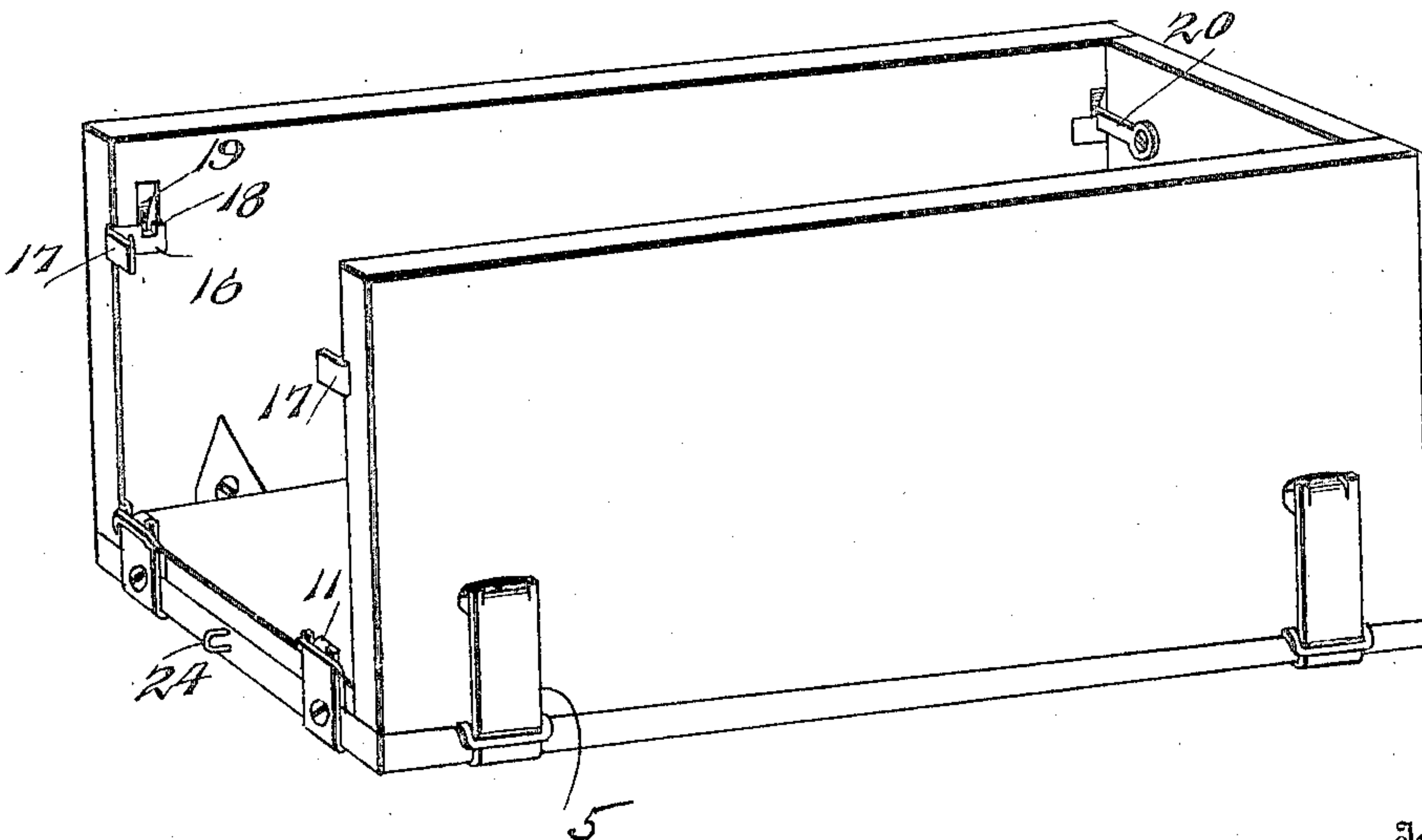


Fig. 2.



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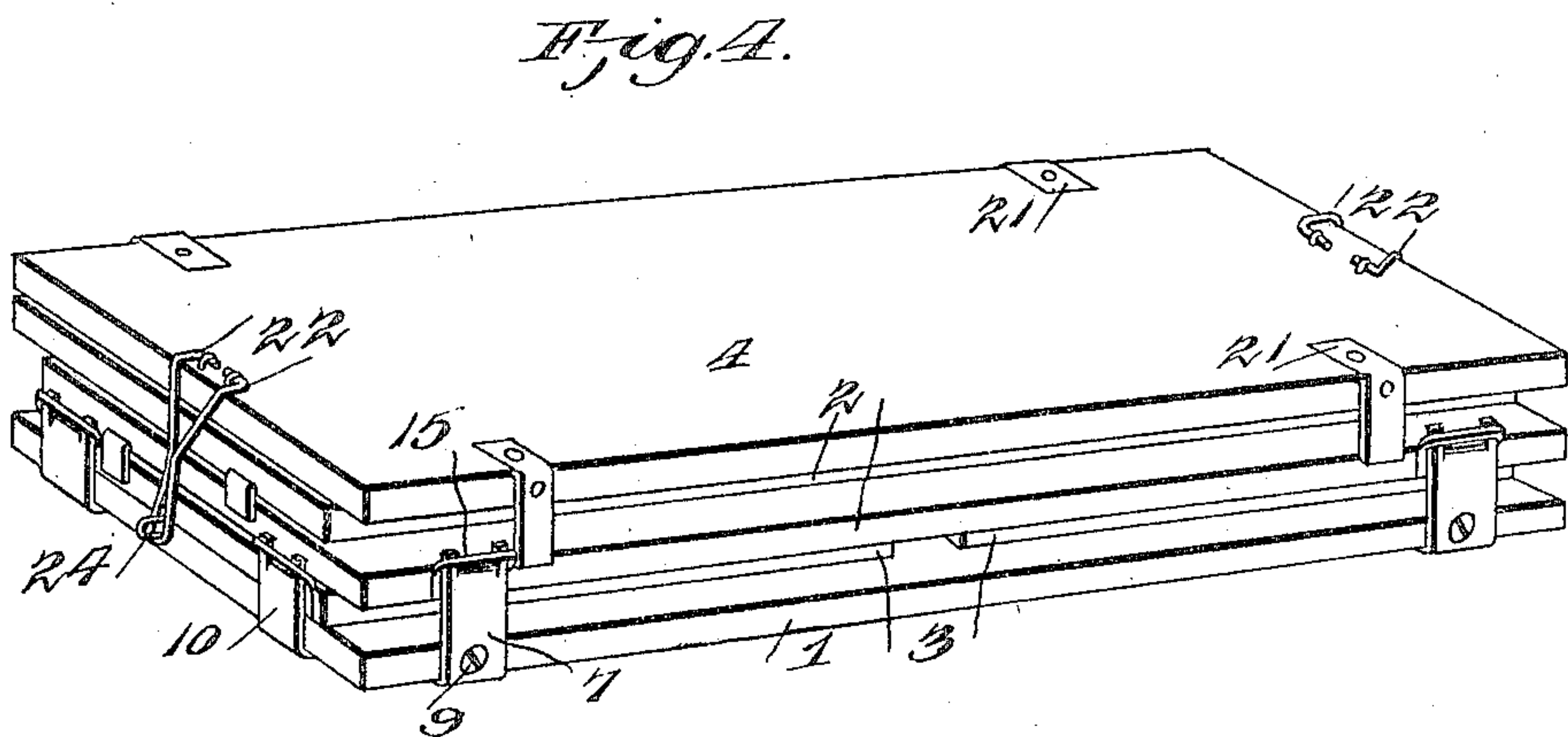
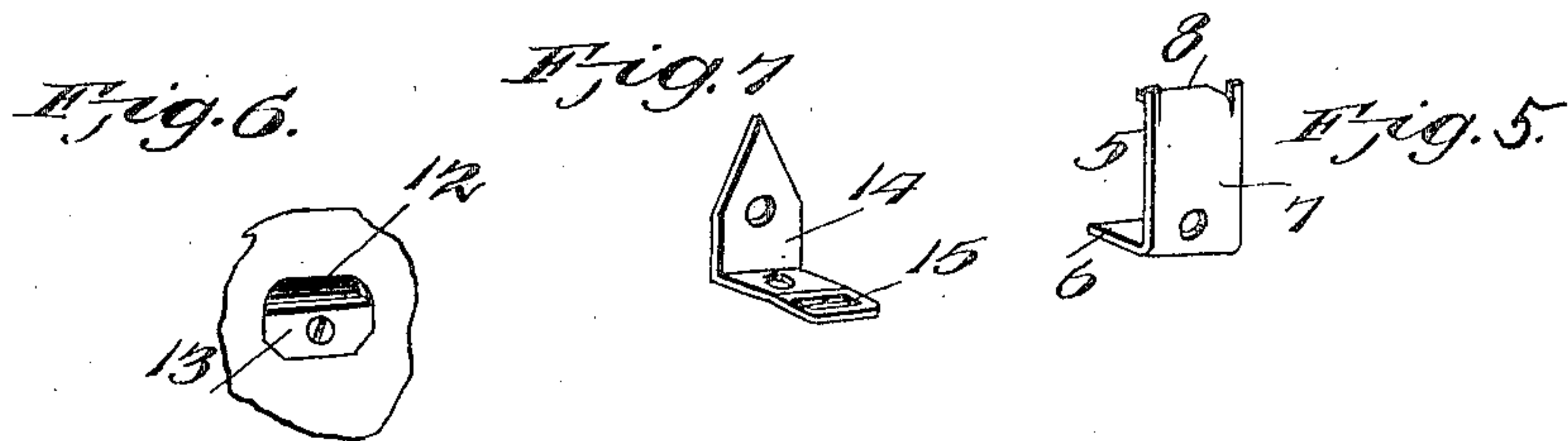
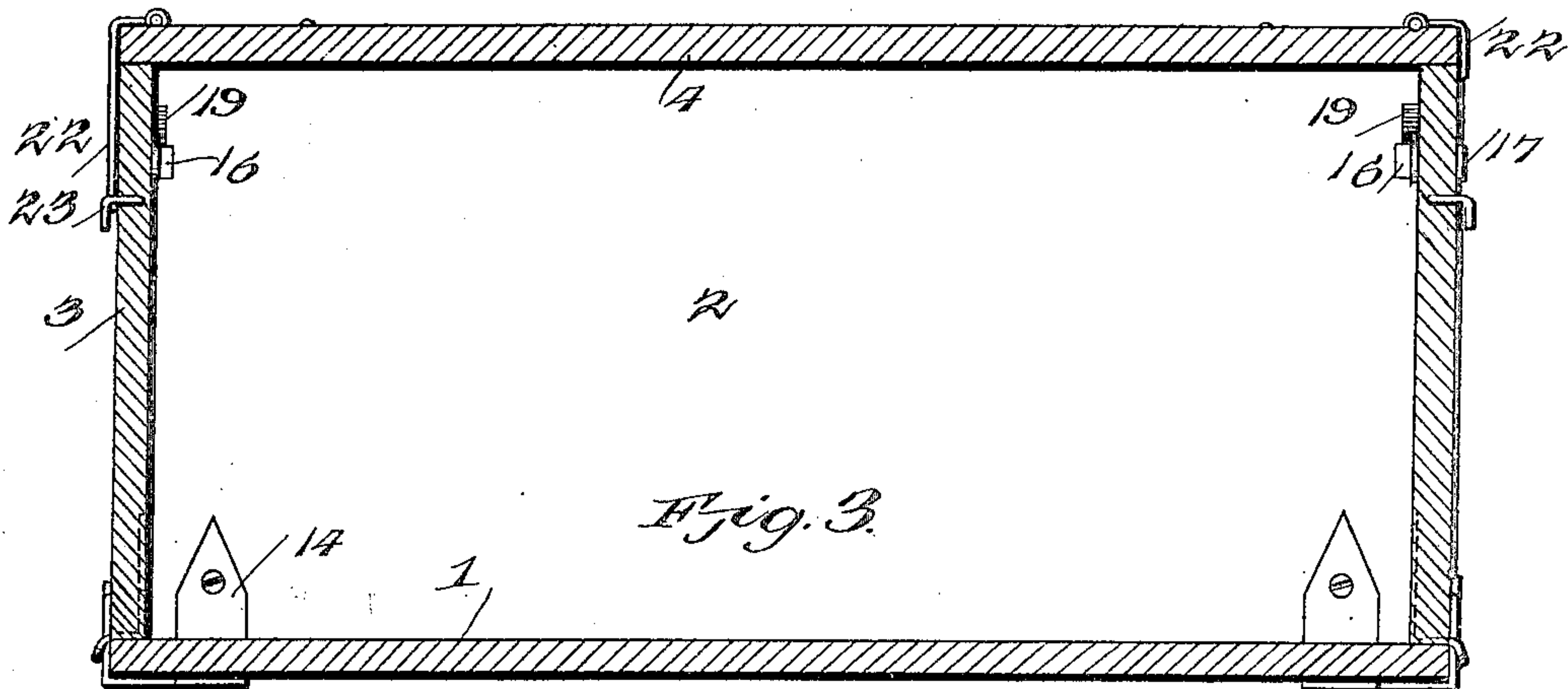
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UNITED STATES PATENT OFFICE.

EDWARD G. BROWN, OF GLENELLEN, CALIFORNIA.

FOLDING BOX.

No. 813,347.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed April 27, 1905. Serial No. 257,728.

To all whom it may concern:

Be it known that I, EDWARD G. BROWN, a citizen of the United States of America, residing at Glenellen, in the county of Sonoma and State of California, have invented new and useful Improvements in Folding Boxes, of which the following is a specification.

This invention relates to folding boxes or crates of the type employed for shipping purposes, and has for its objects to produce a comparatively simple inexpensive device of this character, which may be readily set up for use and one which may be folded into neat compact form for shipment or storage.

A further object of the invention is to provide simple and effective means for maintaining the side and end walls of the crate in secure assemblage with its bottom, one which will permit of the walls of the box being readily collapsed, and one wherein the parts of the crate will when unfolded for use be securely locked against accidental collapsing.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of the crate embodying the invention, showing the same set up for use. Fig. 2 is a similar view with the cover removed and the crate partially collapsed. Fig. 3 is a vertical longitudinal section centrally through the crate. Fig. 4 is a perspective view of the crate in collapsed condition. Fig. 5 is a detail perspective view of one of the connecting members. Fig. 6 is a similar view of one of the keepers. Fig. 7 is a similar view of one of the guide members.

Referring to the drawings, it will be seen that my improved crate comprises a bottom 1, side walls 2, end walls 3, and a top or cover 4, these parts, except as hereinafter explained, being of the usual or any appropriate construction and material.

Attached to the bottom 1, at the side edges thereof and at appropriately-spaced intervals, are connecting members 5, composed of strap metal angularly bent to produce a horizontal portion or flange 6, which engages beneath the bottom, and a vertically-uprising portion 7, having at its upper end an intumed engaging portion or lip 8, these members being secured in place by screws or other fastening devices 9, while at the end edges of the bottom are similar connecting members

having vertically-uprising portions 10, provided at their upper ends with intumed engaging lips 11.

Formed in the side and end walls of the box at appropriate points to register with the connecting members are sockets or seats 12, designed to receive the lips 8 or 11 and each having fixed therein a metal bearing member or keeper 13, while secured to the side and end walls are guide members 14, each composed of strap metal angularly bent to present a vertical portion, which is disposed upon the inner face of the wall, and a horizontal portion extending beneath the edge of the latter and provided at its outer end with a guide-opening or slot 15, designed to slidably engage one of the connecting members. It is to be noted in this connection that the outer end of the guide member containing the slot 15 is angularly bent or deflected for a purpose which will hereinafter appear.

Attached to the inner faces of the side walls 2 and at the ends thereof are members or keepers 16, composed of strap metal and each having an angularly-bent and horizontally-disposed portions 17, constituting a stop or abutment, there being provided in each of the members 16 a notch or recess 18 in register with a socket 19, formed in the adjacent side wall 2, while to the inner faces of the end walls 3 there are pivoted latches or hooks 20, designed for engagement with the keepers 16 to secure the side walls 2 and end walls 3 in unfolded or active position, under which conditions the outer faces of the end walls 3 bear against the stops or abutments 17.

The cover 4 is provided with depending engaging devices or cleats 21, designed, when the crate is unfolded for use and the cover in position thereon, to bear upon the outer faces of the side walls 2 for preventing transverse displacement of the cover and withstanding internal pressure on the side walls, thereby relieving the hooks 20 of a portion of the strain, there being pivoted to the cover at the ends thereof fastening members or bails 22, designed for engagement with studs or keepers 23, carried by the end walls 3.

In practice when the crate is set up for use the lips 8 and 11 seat in their respective sockets 12, thus preventing vertical movement of the walls of the box, while the end walls bear upon the abutment 17 and the latches 20 engage the keepers 16 to maintain the parts in non-collapsed condition, as heretofore explained. After the crate has been filled with

material the cover is placed in position thereon and secured in place by engaging the fastening members or bails 22 with the keepers 23, as will be readily understood. In order
 5 to collapse the box, the end members 3 are released and folded downward upon the bottom 1, as seen in Figs. 2 and 4, the sides being in turn folded inward in flat form, as illustrated in Fig. 4. It is to be noted in this connection that when the parts are in folded position the slotted portions of the guide members 14 ride upward upon the vertical portions of the connecting members, but remain in engagement with the latter, whereby the
 15 walls are not wholly released, and, further, that the connecting members 7 at one side of the box are longer than those at the other, thus permitting of one side being folded to lie upon the folded end members and the
 20 other side upon that previously folded. The walls of the box having been collapsed, the cover is placed in position thereon, as seen in Fig. 4, and prevented from displacement, owing to engagement of the members 21 with
 25 the edges of the folded sides, the cover under these conditions being secured in place by engaging the members or bails 22 with keepers 24, preferably in the form of staples driven into the end edges of the bottom.

30 From the foregoing it is apparent that I produce a simple inexpensive crate which may be readily collapsed for shipment or storage and one in which the parts will when

the box is set up for use be firmly secured against accidental folding, it being understood in attaining these ends minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

1. A collapsible crate comprising a bottom and side and end walls, vertically-uprising connecting members carried by the bottom and having inturned engaging flanges, the walls of the crate being provided with sockets to receive said engaging flanges, slotted guide members carried by the walls and slidably disposed upon the connecting members, and means for securing the walls in non-collapsed position.

2. A collapsible crate comprising a bottom and a foldable wall, the latter being provided with a socket, a connecting member carried by the bottom and having an inturned flange designed to enter said socket, a slotted guide member carried by the wall and slidably engaged with the connecting member, and means for securing the wall in non-folded position.

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

EDWARD G. BROWN.

Witnesses:

CHAS. J. PAPPE,
 THEO. WAGNER.