

J. S. STRASSEL.
 COLLAPSIBLE CRATE OR BOX.
 APPLICATION FILED MAR. 23, 1908.

929,894.

Patented Aug. 3, 1909.
 3 SHEETS—SHEET 1.

Fig. 1.

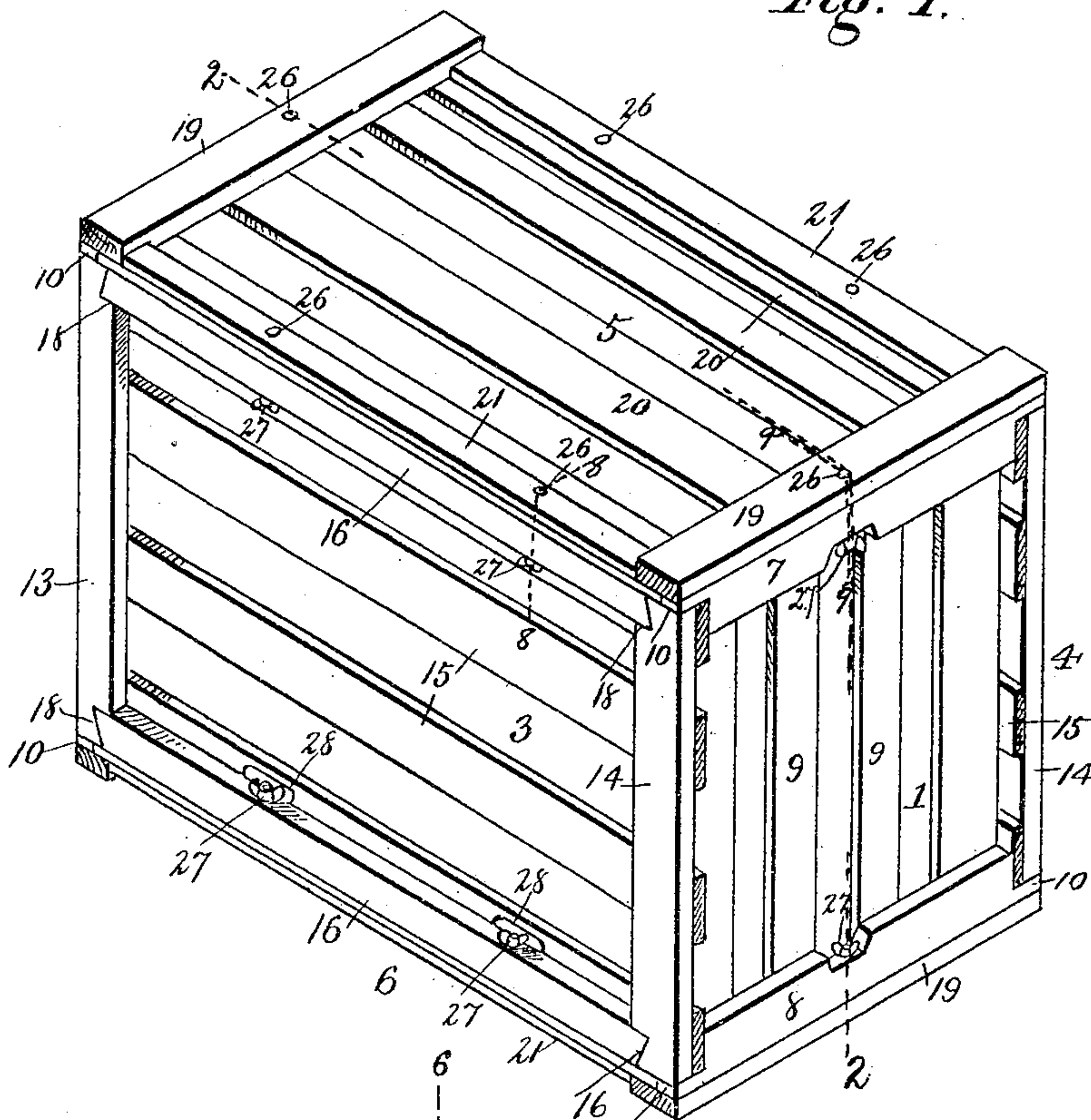
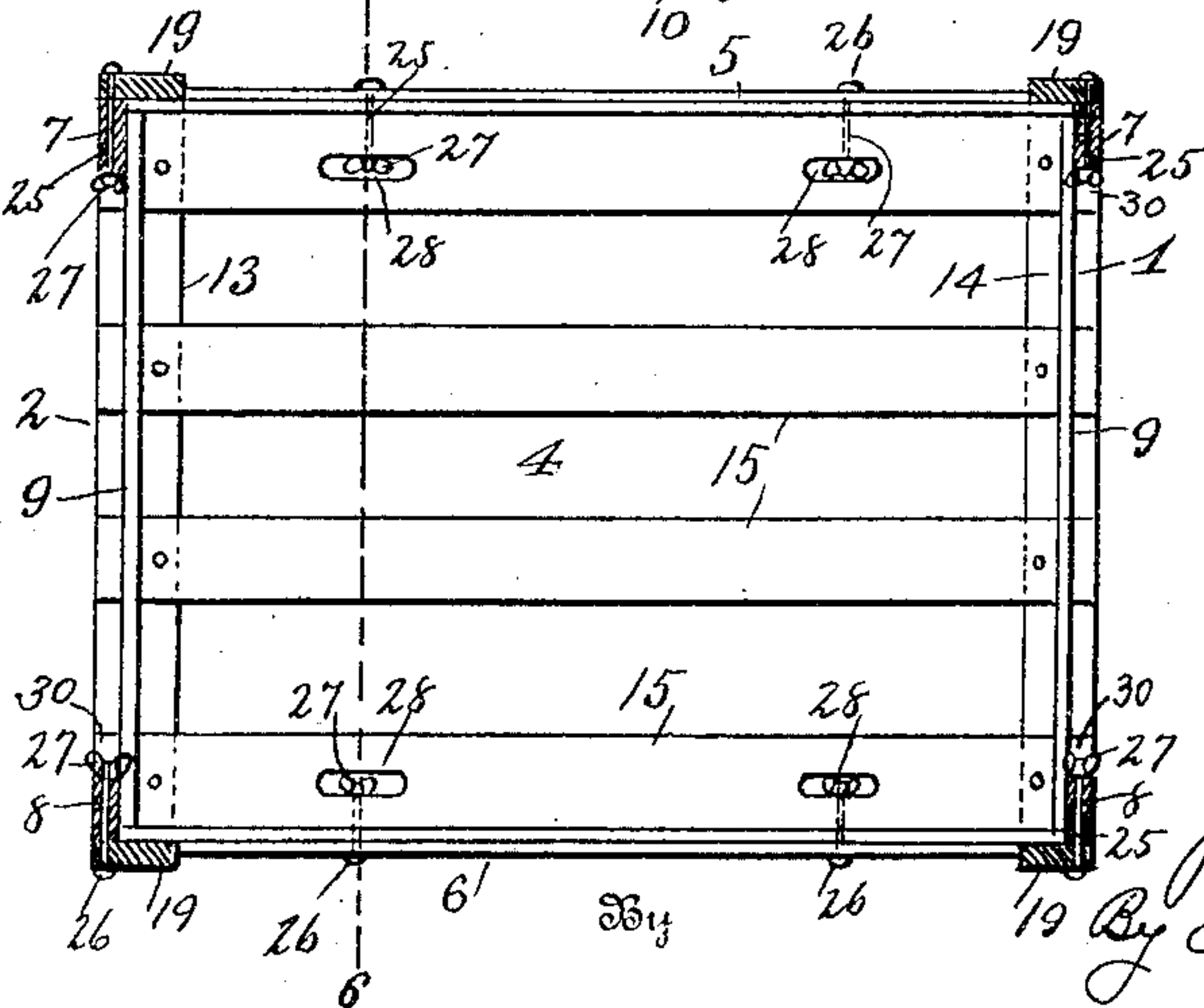


Fig. 2.



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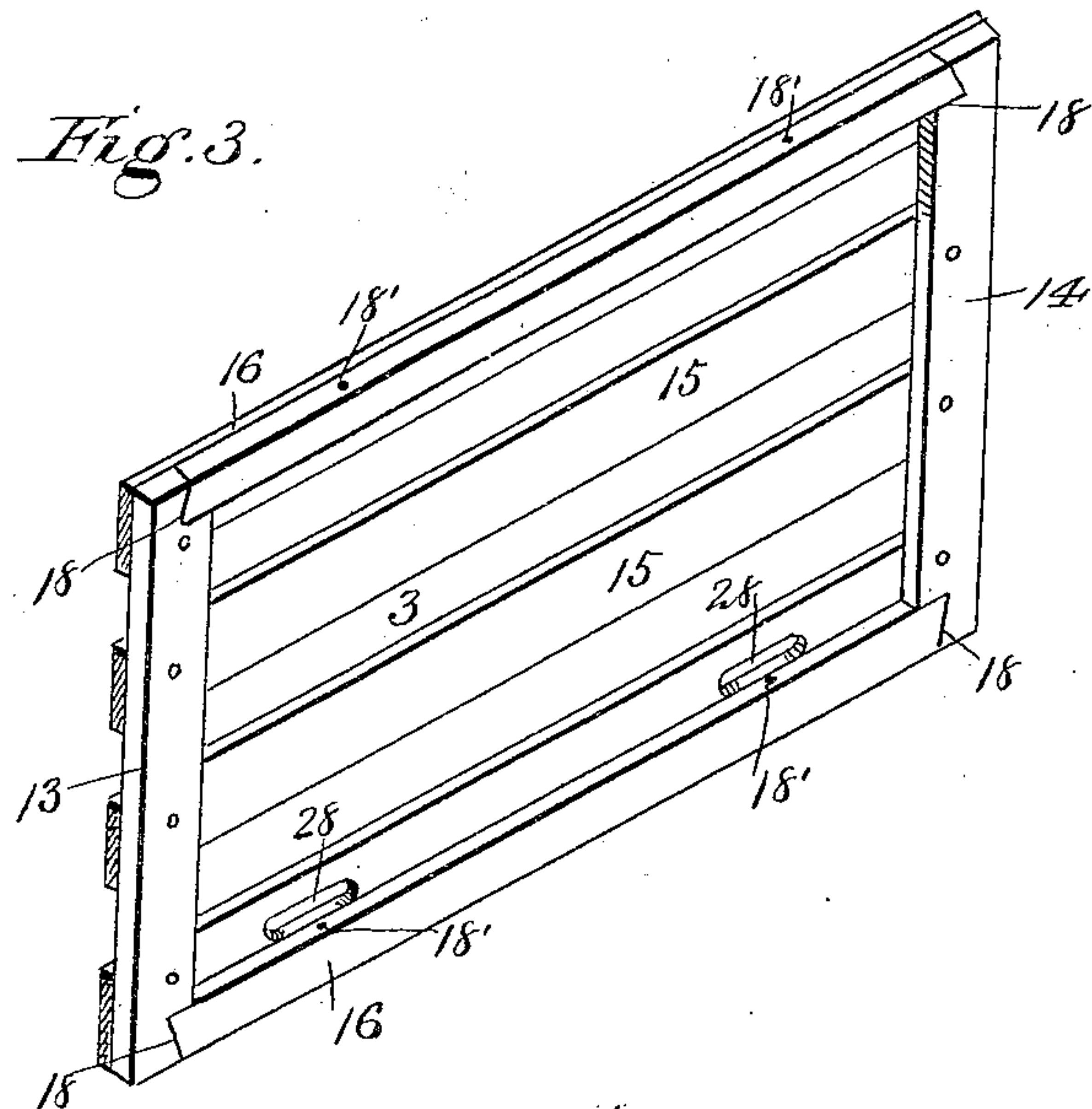


Fig. 4.

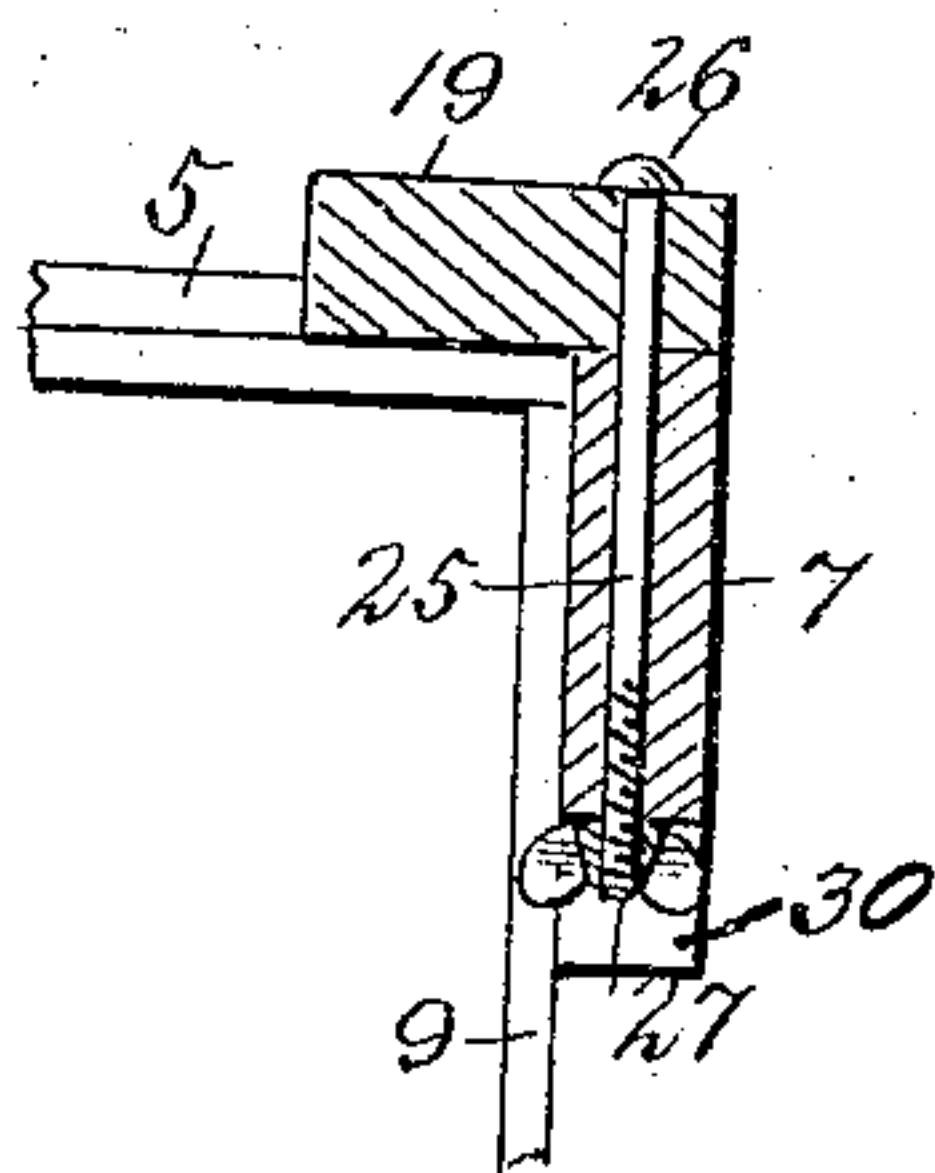
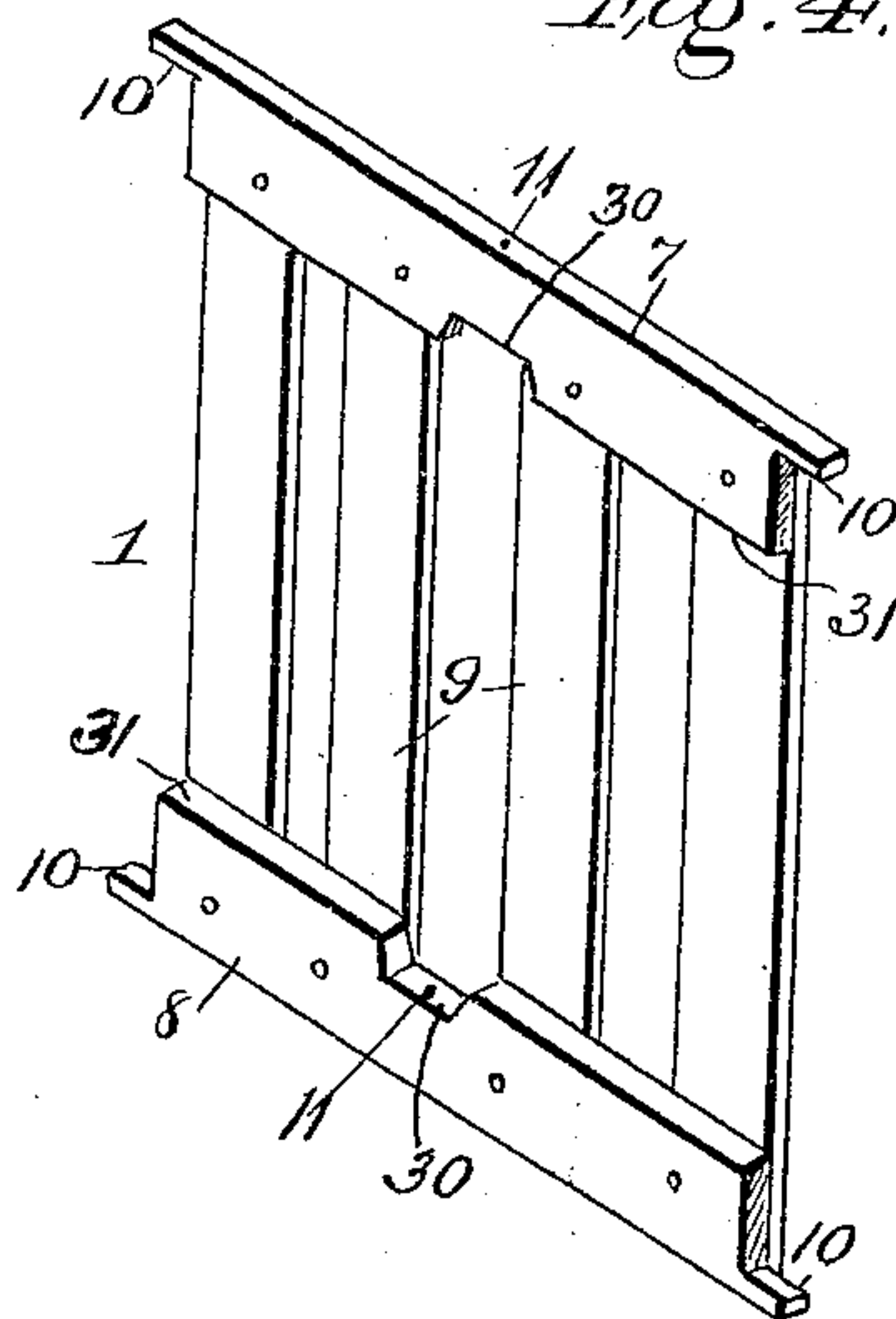


Fig. 9.

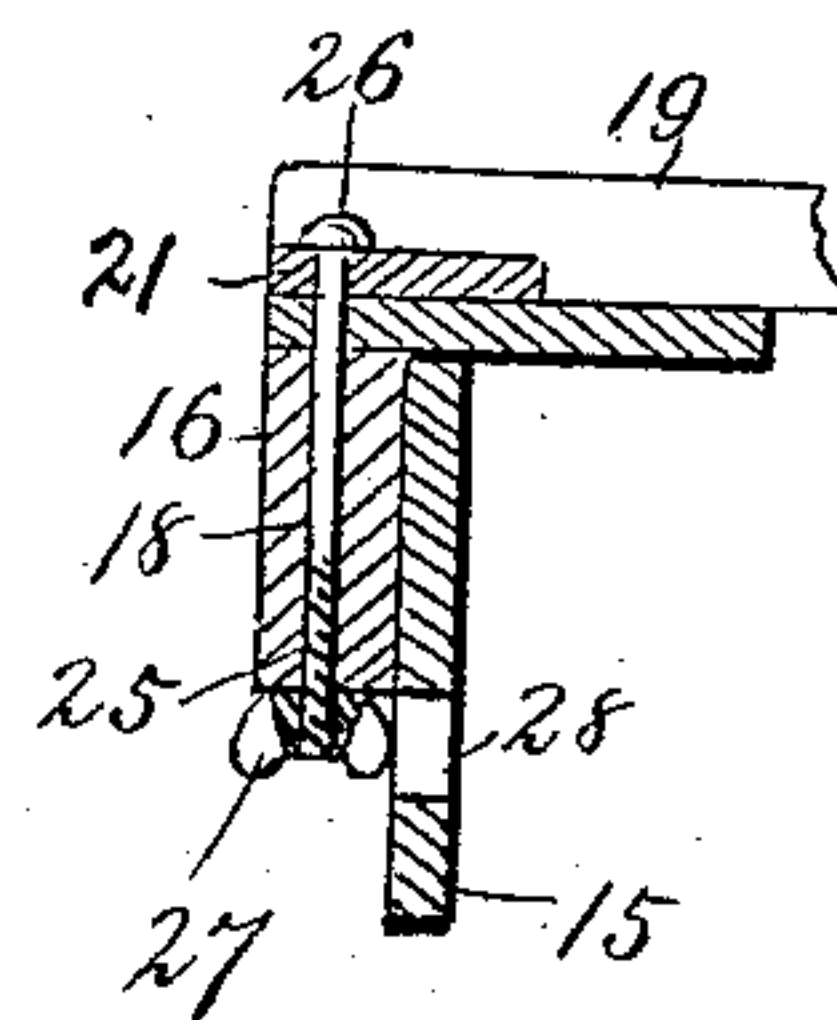


Fig. 8.

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3 SHEETS—SHEET 3.

Fig. 6.

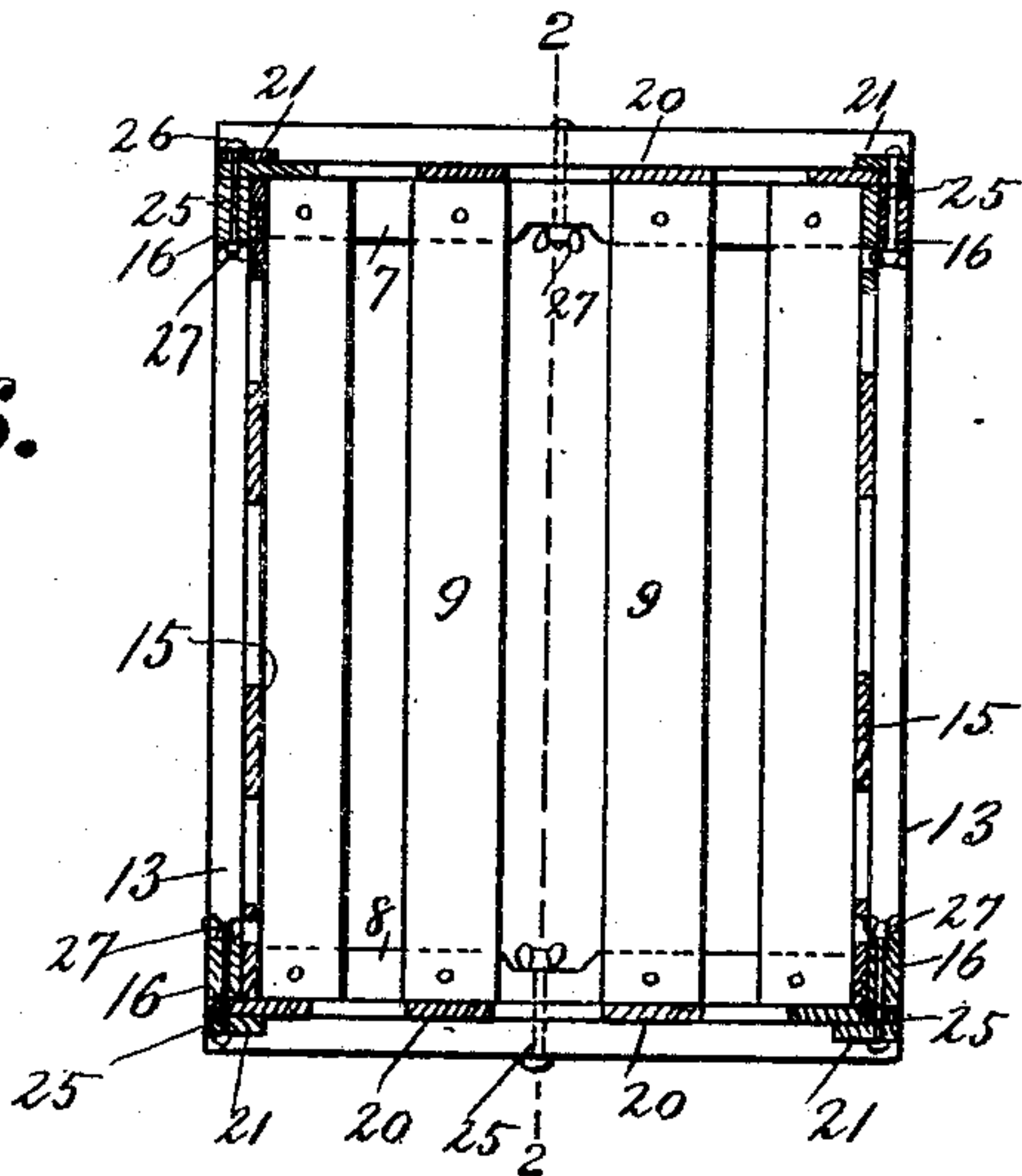


Fig. 5.

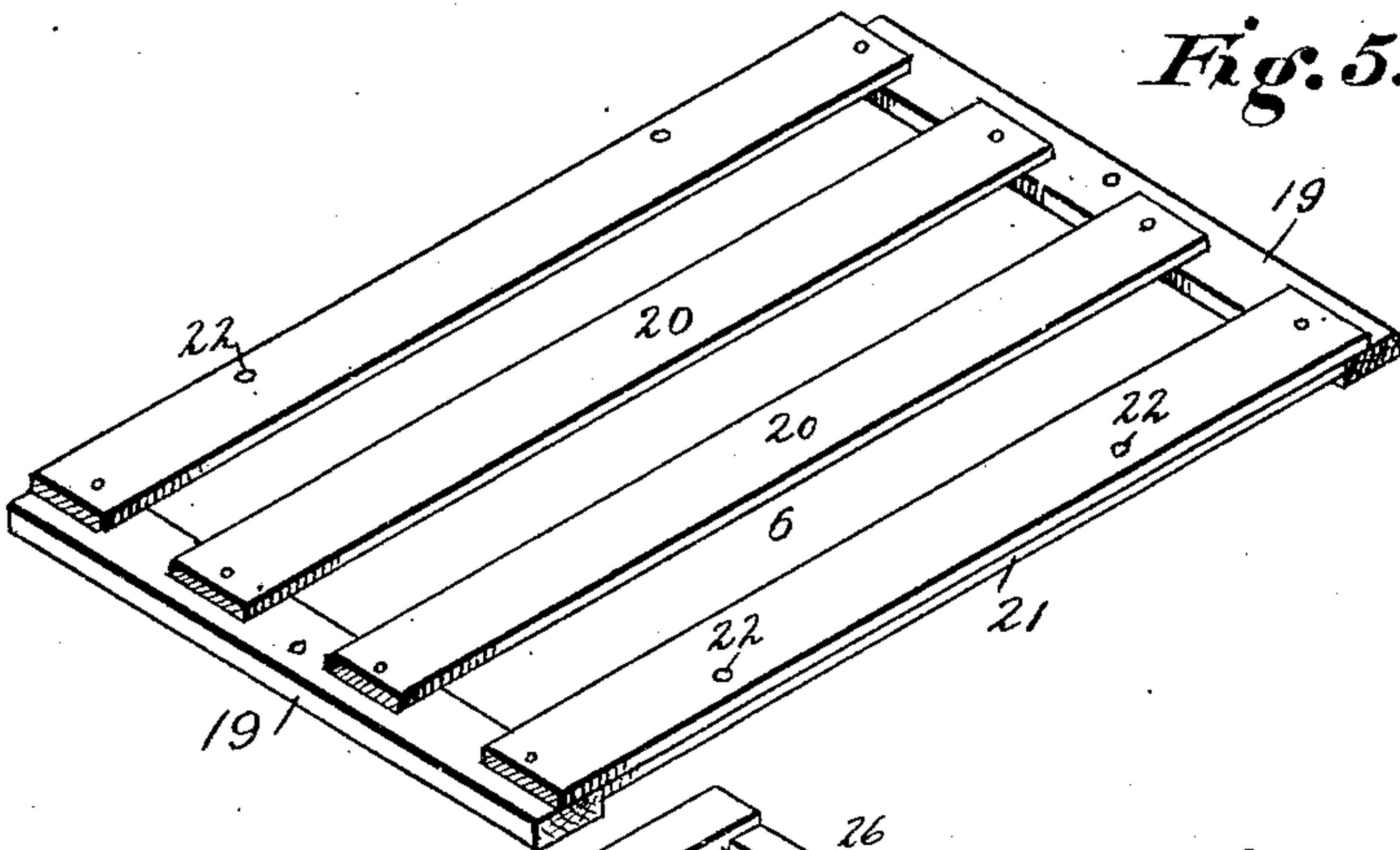
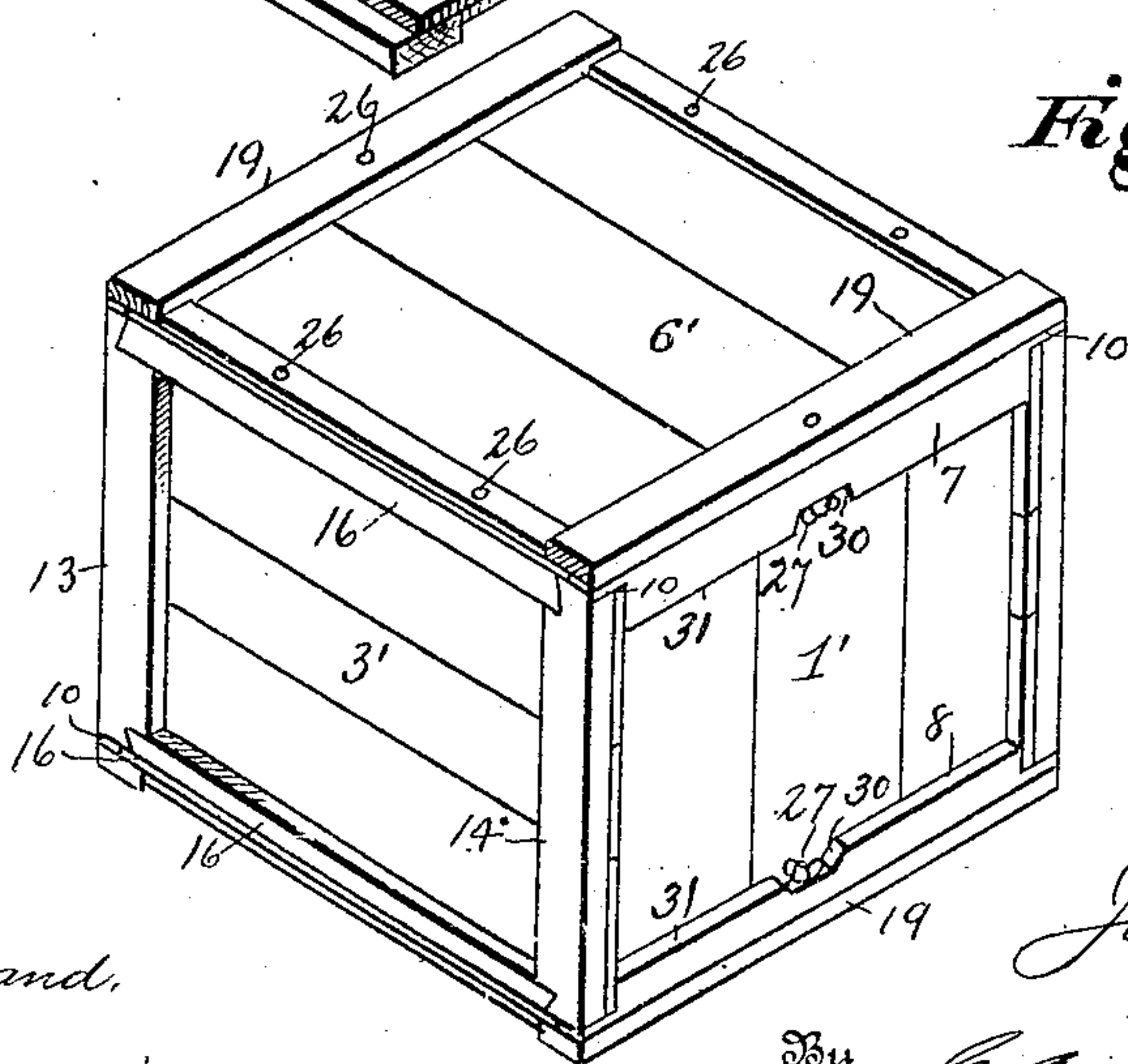


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN S. STRASSEL, OF LOUISVILLE, KENTUCKY.

COLLAPSIBLE CRATE OR BOX.

No. 929,894.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed March 23, 1908. Serial No. 422,722.

To all whom it may concern:

Be it known that I, JOHN S. STRASSEL, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful improvements in Collapsible Crates or Boxes, of which the following is a specification.

My invention relates to collapsible crates and boxes and among the objects in view is to provide a collapsible crate or box which can be quickly put together and taken apart, and the sections of which will be firmly and securely held together and not liable to become loosened in handling or shipping.

A further object of my invention is to provide a collapsible crate or box wherein the sections will be secured detachably together, solely by means of bolts and tightening nuts, no nailing being necessary to secure the parts together.

The invention consists in the novel construction, arrangement, and combination of parts constituting the crate or box, as herein-after fully described, illustrated in the drawings and pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view of my improved device in the form of a crate with the parts secured together. Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of one of the sides of the crate. Fig. 4 is a perspective view of one of the ends of the crate. Fig. 5 is a perspective view of one of the sections forming either the top or the bottom of the crate. Fig. 6 is a vertical sectional view on the line 6—6 of Fig. 2. Fig. 7 is a perspective view of my device in the form of a box, and Figs. 8 and 9 are sections on lines 8—8 and 9—9 of Fig. 1 respectively.

When my device is constructed in the form of a crate, it comprises the sections 1 and 2 forming the heads or ends of the crate, the sections 3 and 4 forming the sides, and the sections 5 and 6 forming the top and bottom of the crate.

The sections 1 and 2 are exactly similar in construction and each comprises strips 7 and 8, to one face of which are nailed the slats or strips 9. The strips 7 and 8 are provided at the ends with tongues 10 for a purpose presently explained. The said strips 7 and 8 are each provided about centrally thereof with a bolt-opening 11.

The sections 3 and 4 forming the sides

of the crate are similar in construction and each comprises strips 13 and 14 to one face of which are nailed the slats or strips 15. Strips 16 are suitably secured to the strips 13 and 14, preferably by beveling the ends of the strips 16 and fitting said ends into angular mortises 18 in the strips 13 and 14. The lateral strips 15 are nailed to the strips 16 to give additional strength. The strips 16 of each of the sections 3 and 4 are provided with a plurality of bolt-openings 18', and I show the said strips 16 as being provided with two of said bolt-openings.

The sections 5 and 6 of the crate are similar in construction, and either of these sections may form the top or the bottom of the crate. Each of said sections 5 and 6 comprises strips 19 to one face of which are nailed slats or strips 20, and strips 21 nailed to the lateral strips 20. These strips 21 give additional strength to the said lateral strips 20, the said lateral strips 20 and the strips 21 being provided with a plurality of bolt-openings 22, adapted to align with the bolt-openings 18' in the strips 16 of the sections 3 and 4.

It will be observed that the slats 20 terminate short of the outer edges of the strips 19 and that when the parts are set up, a space 23 will be formed between the strips 19 of the sections 5 and 6, and the strips 13 and 14 of the sections 3 and 4, and into these spaces fit the tongues 10 of the sections 1 and 2. The strips 13 and 14 of the sections 1 and 2 also rest upon the ends of the strips 20 to give additional support to the end sections. It will also be observed that the strips 19 of the sections 5 and 6 are of such a thickness that said strips will project beyond the strips 21 so as to rest upon the ground without permitting said strips 21 to come in contact with the ground.

For securing the sections of the crate firmly yet detachably together, without the use of nails or other securing means, I provide securing bolts 25 which pass through the various aligned openings in the sections as heretofore described, these bolts being provided with heads 26 and upon which bolts thumb-nuts 27 screw and when the sections are set up with the bolt-openings properly aligning, the bolts are inserted and the thumb-nuts then screwed up upon the bolts as tightly as possible so as to firmly secure the parts together.

The strips 15 of the sections 3 and 4 are

provided with slots 28 opposite the thumb-nuts on the bolts which secure the sections 3 and 4 to the sections 5 and 6, whereby the said thumb-nuts may be readily manipulated.

The strips 7 and 8 of the sections 1 and 2 are cut away as at 30 around the bolt-openings in said strips so that the thumb-nuts upon the bolts passing through said openings will not project beyond the inner edges 31 of the said strips and thereby not be liable to become accidentally loosened.

It will be understood that I do not wish to be restricted to the number of securing bolts used to secure the sections of my crate together, as the number of such bolts may be varied and a corresponding number of bolt-openings provided for said bolts. Also, the number of slats entering into the construction of the various sections may be varied as desired.

When my device is to be constructed in the form of a box, as seen in Fig. 7, I would dispense with the use of the slats and substitute solid boards for the slats in the construction of the ends 1', 2', the sides 3', 4', and the top and bottom 5' and 6'. The remaining features of construction would be the same as those described with reference to the construction seen in Figs. 1 to 6.

My improved crate or box can be made in various sizes and of varying relative dimensions.

What I claim is:—

1. In a collapsible crate, the combination with the end sections 1 and 2, each consisting of strips 7, 8 and 9 secured together as described, said strips 7 and 8 being provided with tongues 10, the side sections 3 and 4, each consisting of strips 13, 14, 15 and 16 arranged as described, said strips 16 being beveled at the ends and the said ends fitting into angular mortises 18 in the strips 13 and 14, and the top and bottom sections 5 and 6, each consisting of strips 19 and 20, said strips 20 terminating short of the outer edges of the strips 19, and the latter strips

forming spaces between them and the strips 13 and 14 of the sections 3 and 4, within which spaces fit the tongues 10 of the sections 1 and 2, the said strips 13 and 14 resting upon the ends of the strips 20, of means for detachably securing the sections together, comprising headed bolts passing through alining openings in the strips 7, 8, 13, 14 and 19, and thumb-nuts screwing upon the said bolts and adapted to tighten the parts as set forth.

2. In a collapsible crate, the combination with the end sections 1 and 2, each consisting of strips 7, 8 and 9 secured together as described, said strips 7 and 8 being provided with tongues 10, the side sections 3 and 4, each consisting of strips 13, 14, 15 and 16 arranged as described, said strips 16 being beveled at the ends and the said ends fitting into angular mortises 18 in the strips 13 and 14, and the top and bottom sections 5 and 6, each consisting of strips 19, 20 and 21 secured together as described, said strips 20 terminating short of the outer edges of the strips 19, and the latter strips forming spaces between them and the strips 13 and 14 of the sections 3 and 4, within which spaces fit the tongues 10 of the sections 1 and 2, the said strips 13 and 14 resting upon the ends of the strips 20 and the strips 19 being of such thickness that they project beyond the strips 21 so as to rest upon the ground without permitting said strips 21 to come in contact with the ground, of means for detachably securing the sections together, comprising headed bolts passing through alining openings in the strips 7, 8, 13, 14, 19 and 21, and thumb-nuts screwing upon the said bolts and adapted to tighten the parts as set forth.

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

JOHN S. STRASSEL.

Witnesses:

PAUL BLACKWOOD,
EMILE SUMFELD.