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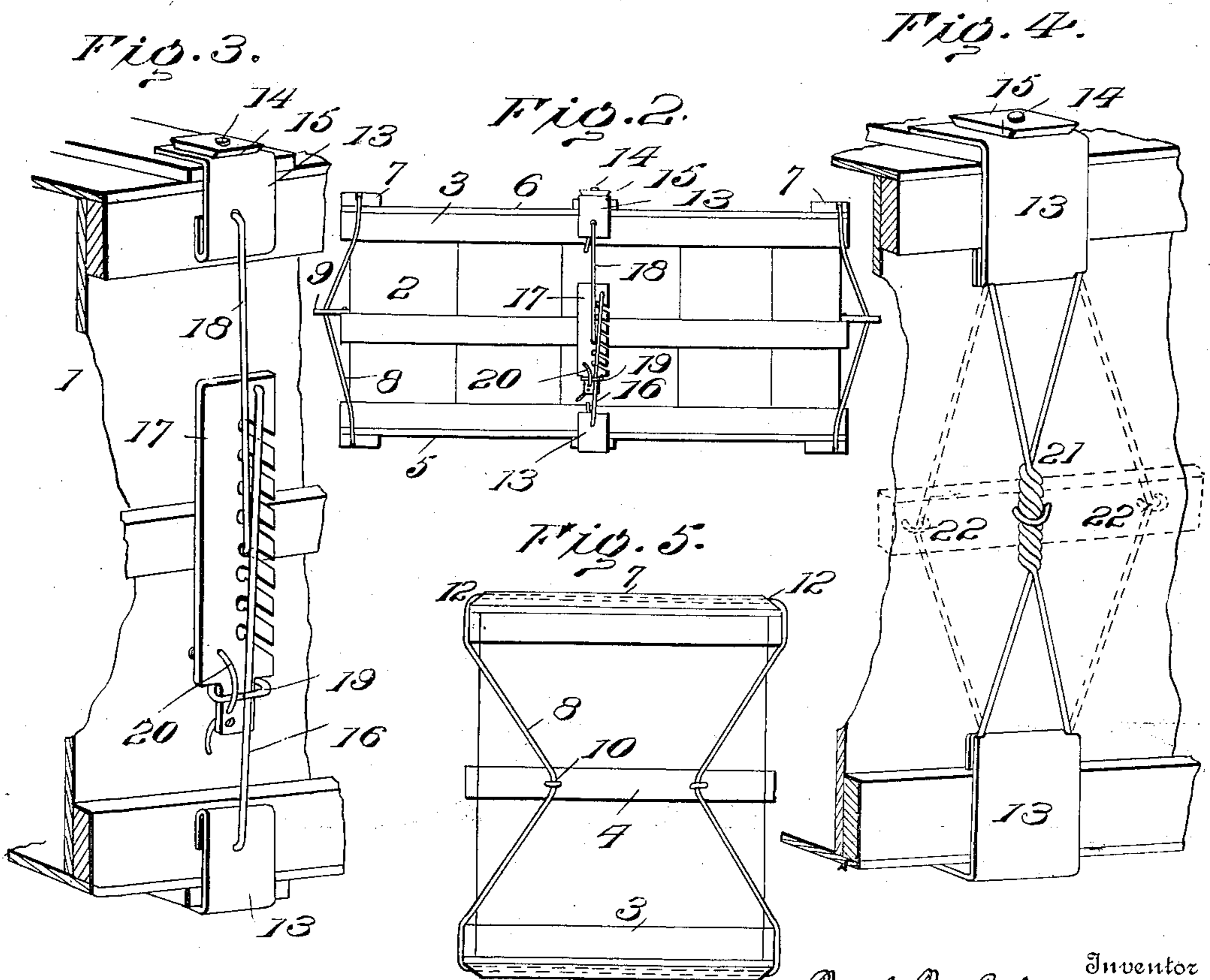
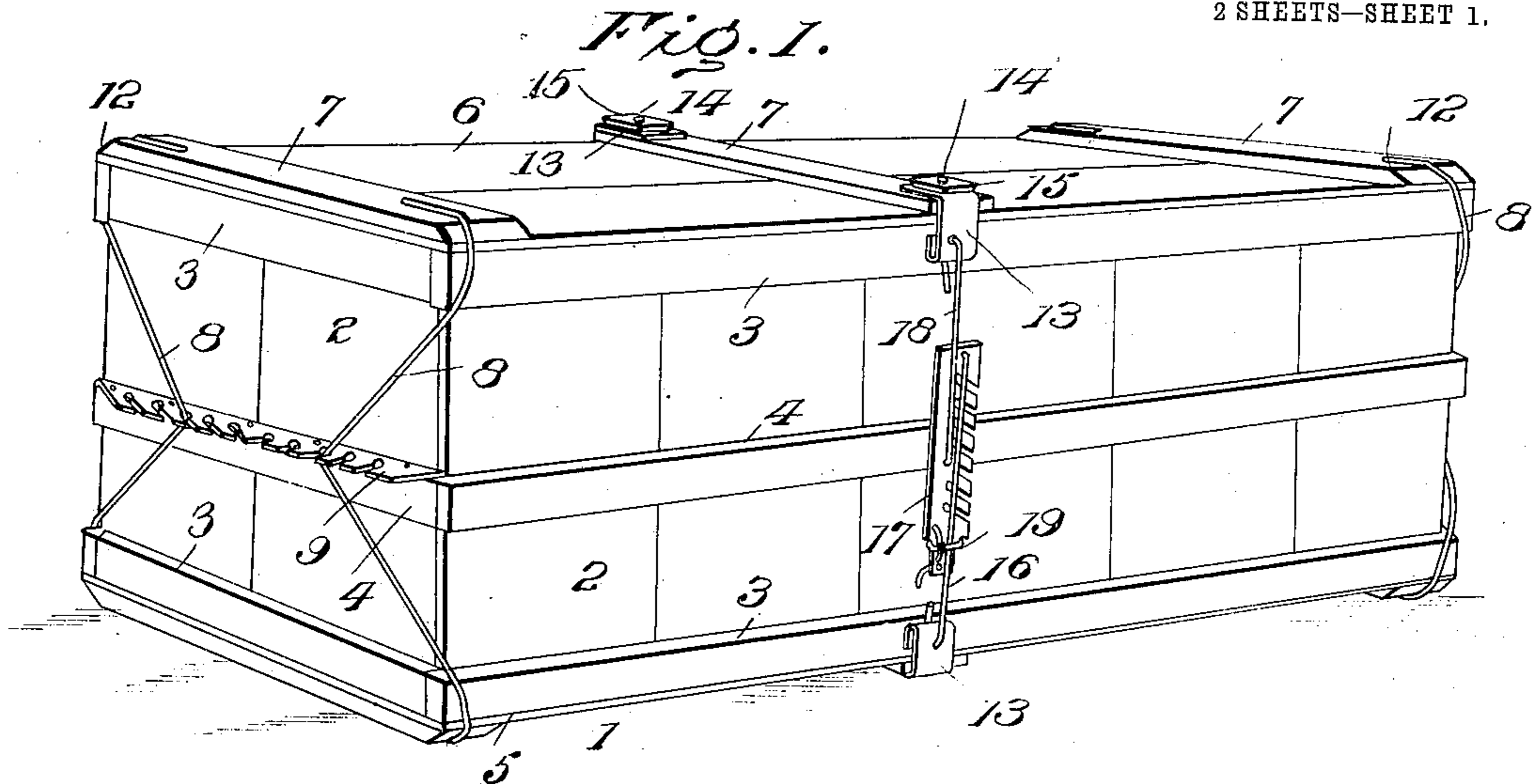
PATENTED JAN. 14, 1908.

M. N. EDWARDS.

BOX OR CRATE.

APPLICATION FILED JAN. 29, 1906.

2 SHEETS—SHEET 1.



Witnesses
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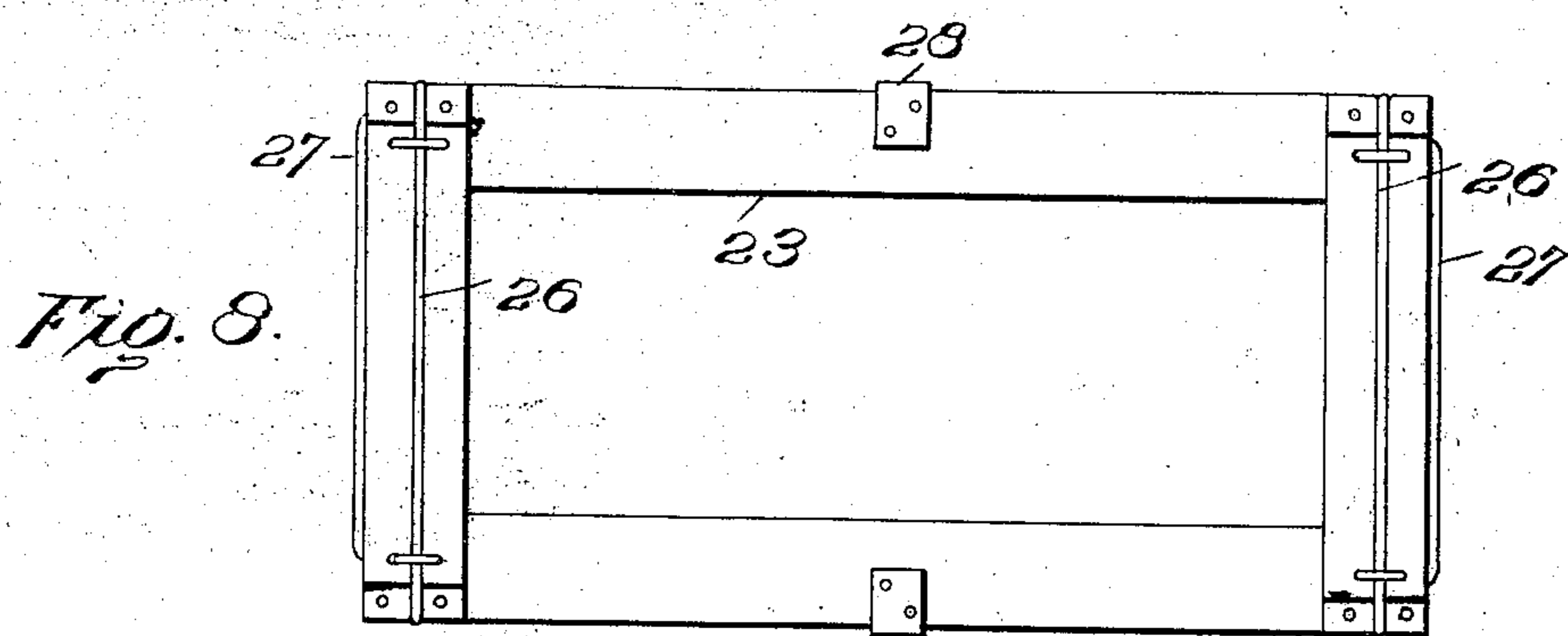
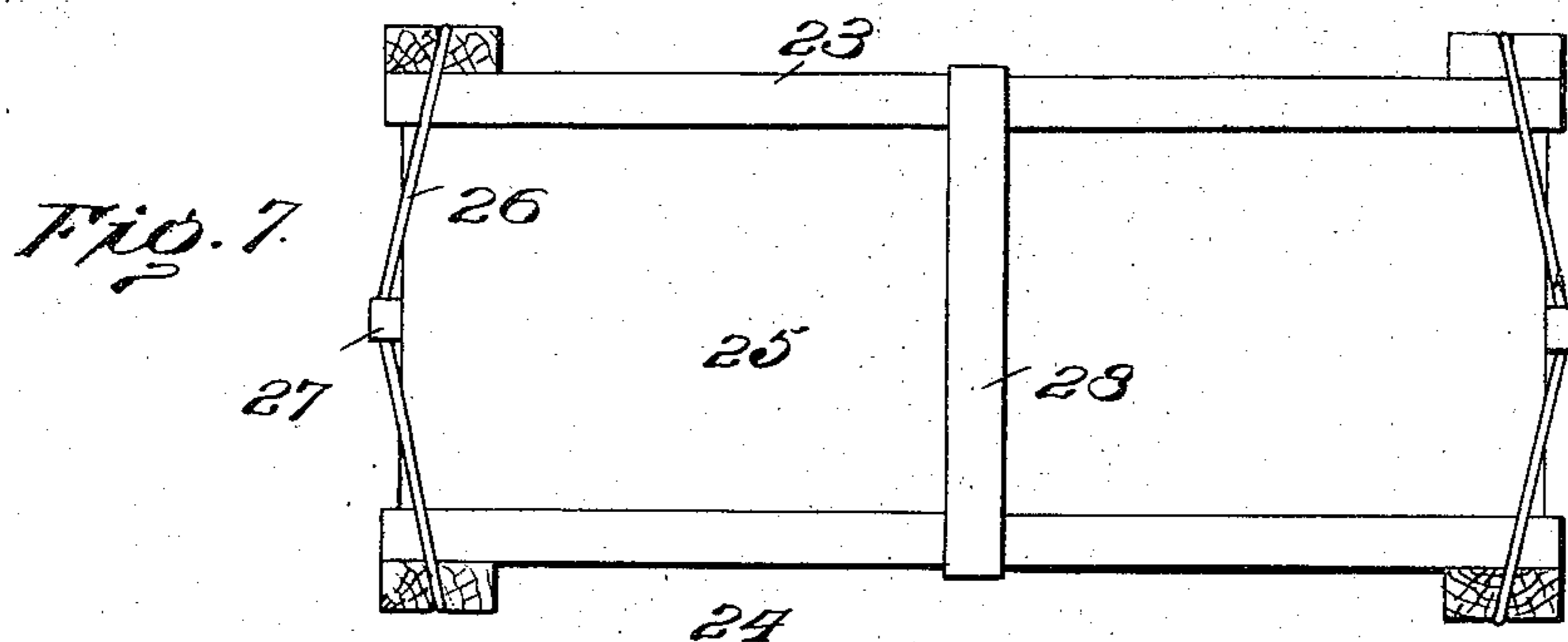
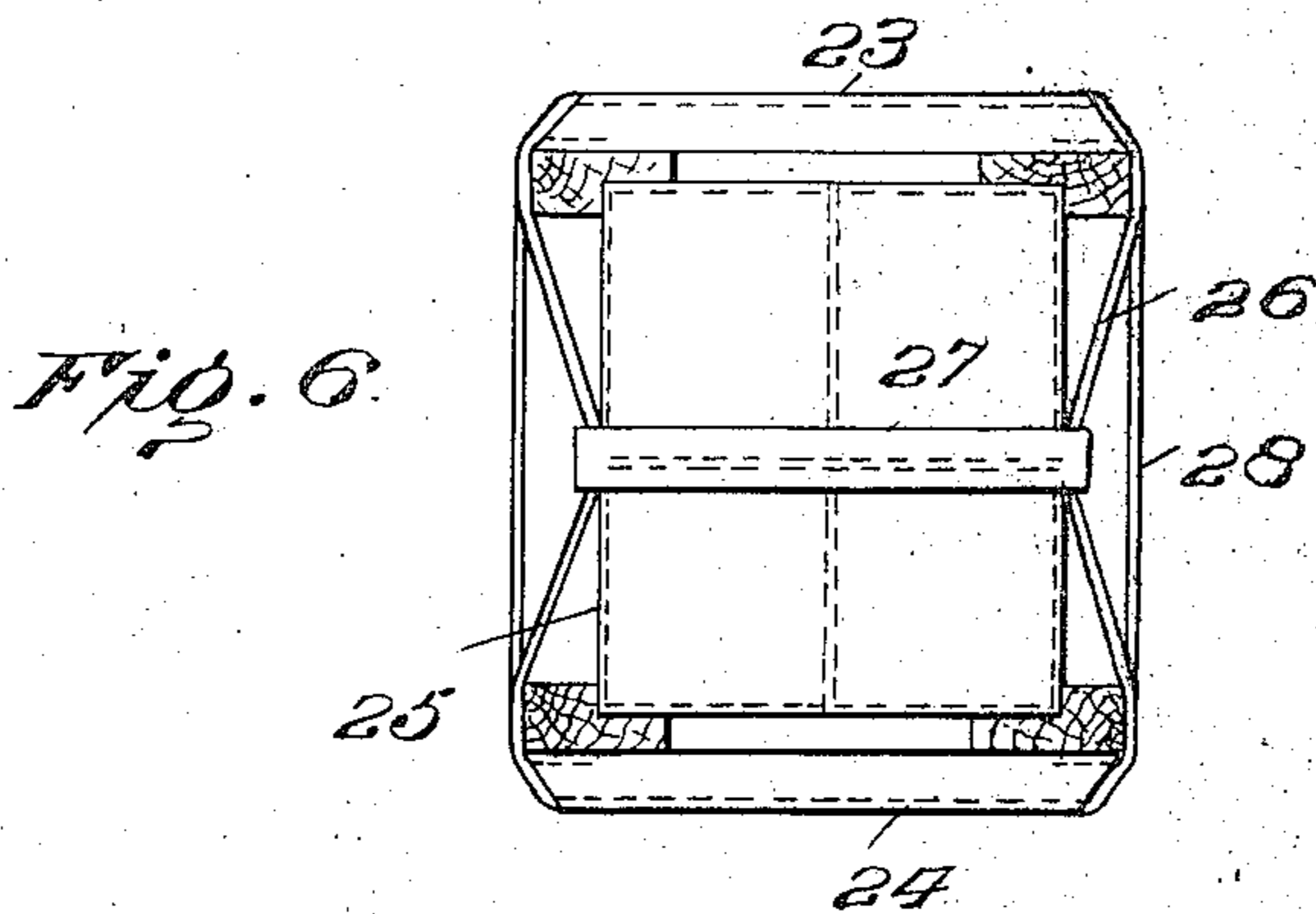
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

MILO N. EDWARDS, OF GLENWOOD SPRINGS, COLORADO.

BOX OR CRATE.

No. 876,900.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed January 29, 1906. Serial No. 298,484.

To all whom it may concern:

Be it known that I, MILO N. EDWARDS, of Glenwood Springs, in the county of Garfield and State of Colorado, have invented certain
5 new and useful Improvements in 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
10 make and use the same.

The primary object of this invention is to provide a packing or shipping box or crate which will be light in weight and capable of repeated use.

15 The invention relates primarily to means for securing the cover in such manner that the box may be readily assembled or opened without danger of injury to any of its parts.

20 The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of a box constructed in accordance with my invention. Fig. 2 is
25 a side view. Fig. 3 is an enlarged view of the clamp binding plate. Fig. 4 shows in perspective two forms of modification. Fig. 5 is an end view of a box showing different means for securing the binding wires. Figs.
30 6, 7 and 8 are end, side and plan views, respectively, of a crate constructed in accordance with my invention embodying a slight modification.

In Fig. 1 I have shown box 1 as having its
35 sides and ends composed of panels 2 and upper and lower brace bars 3 and central or intermediate brace bars 4. These panels may be made of wood, or some of wood and others of pasteboard. The bottom 5 is perma-
40 nently secured to the sides and ends, while the cover 6 is capable of being removed without danger of damaging the box or the cover. The latter is shown as composed of longitudinal panels and cross bars 7. It is secured in
45 place, at its end, by two wires 8, which at their ends engage and are secured to the end cross bars of the cover and the bottom. These wires are of greater length than the
50 depth of the box, but by drawing the wires toward each other at their centers, and positively fastening them transversely of the ends of the box, and preferably to such ends, not only is the cover held down against the body of the box, but its longitudinal displacement is prevented.

In Fig. 1 I have shown the wires as held by

a rack or toothed plate 9 secured to the central brace bar at the ends of the box, such wires being drawn together, by any suitable means, and forced into engagement with two
60 of the teeth of plate 9. But any suitable means may be employed, such as staples 10 driven into the brace bar, as shown in Fig. 5. It is manifest that one wire passed lengthwise of each end brace bar of the cover and
65 bottom may be used in lieu of two wires, but when the latter are employed their ends are preferably bent and pointed and forced into said brace bars, as shown in Fig. 1. To prevent undue cutting of the ends of the bars,
70 since the wires run longitudinally of the grain, such ends may be beveled, as at 12.

To additionally bind the cover in place, angle plates 13 may be secured to the cover and the bottom. The lower plates are preferably permanently attached, while the upper plates are detachably secured by nails 14
75 driven into the central brace bar of the cover. These nails are passed through small washers 15 having inwardly beveled edges to permit
80 of the ready insertion of a tool thereunder to effect the extraction of the nails without injury to the angle plates or the cover. These upper and lower angle plates are connected
85 by suitable means capable of exerting a tension on said plates. In Figs. 1, 2 and 3, I have shown the lower wire 16 as being secured to a rack plate 17, near the upper end thereof, while the upper wire 18 is formed
90 with a looped end for engaging the teeth of plate 17. This plate turns on the wire 16 as a pivot, and after the looped end of wire 18 is placed in engagement with one of the teeth, a leverage is effected on both wires by turning
95 the plate downwardly into a vertical position, its lower end being held locked by a loop 19 engaging a reduced extension thereof. A small locking wire 20 passed through an opening in such extension will prevent the
100 accidental slipping off of the loop. To release the clamp, it is only necessary to remove loop 19, and turn the clamp so as to release the tension on the oppositely drawn wires 16 and 18. In lieu of the means described, these angle plates may be held under
105 tension either by twisting together two wires 21, as shown in full lines, Fig. 4, or by expanding such wires and fastening them by staples 22, to the central brace bars of the sides of the box, as shown in dotted lines,
110 same figure.

The principle of my invention may be em-

ployed in connection with a crate for the shipment of canned goods. This is shown in Figs. 6, 7 and 8, wherein the cover 23, and the bottom 24 are made in skeleton form, that is to say, with longitudinal bars rabbeted on their lower faces and united at their ends by the brace bars. The rabbeted edges engage the upper and lower outer portions of two double rows cans, and the latter are inclosed, at the bottom, top, sides and ends, by pasteboard 25. The top or cover and the bottom are held together by wires 26, which are drawn toward each other at their centers and held by any suitable means, that shown consisting in each instance of a single metallic plate 27 whose ends are bent around the wires so as to hold them taut. These clamping plates 27 abut against the ends of the pasteboard inclosure, and in consequence each plate serves not only to hold the wires, but by reason of its engagement with the ends prevents longitudinal displacement of either the cover or bottom. If desired, or deemed necessary, the cover and bottom may be additionally secured together at their centers either by the means before described or by ordinary strap irons 28, as shown in Fig. 7.

The advantages of my invention will be apparent to those skilled in the art. A box or crate constructed in accordance therewith will be simple and inexpensive and capable of frequent re-use. It is manifest that changes or modifications may be made without departing from the scope of the invention.

I claim as my invention:

1. A box or crate having its bottom and cover provided at their ends with cross bars, binding wires secured to the outer faces of said cross bars and carried over the ends thereof, said wires being of such length as to permit of their being drawn toward each other at their centers, transversely of the body of the box or crate at the ends thereof, and means for attaching such wires at their centers to said ends when so drawn toward each other.

2. A box or crate having its bottom and cover provided at their ends with cross bars, the ends of said cross bars being beveled, binding wires secured to the outer faces of

said cross bars and carried over the beveled ends thereof, said wires being of such length as to permit of their being drawn toward each other at their centers, transversely of the body of the box or crate at the ends thereof, and means for attaching such wires at their centers to said ends when so drawn toward each other.

3. A box or crate having its bottom and cover provided at their ends with brace bars, binding wires secured to the outer faces of said brace bars and passed over the ends thereof, such wires being of such length as to permit of their being drawn toward each other at their centers, transversely of the box or crate at its ends, and rack plates secured to the ends of said box or crate with which said wires are designed to engage and by which they are held.

4. A box having a removable cover, binding wires engaging the cover and the bottom of the box, means for binding such wires, angle plates secured to the cover and the bottom, wires secured to said angle plates, a plate having teeth in one of its edges, one of said wires being secured to one end of said plate, the other wire having a loop at its free end for engaging said teeth, and means movable on one of said wires for holding said plate when the wires are under tension.

5. A box having a removable cover, binding wires engaging the cover and the bottom of the box, means for binding such wires, angle plates secured to the cover and the bottom, wires secured to said angle plates, a plate having teeth in one of its edges, one of said wires being secured to one end of said plate, the other wire having a loop at its free end for engaging said teeth, means movable on one of said wires for holding said plate when the wires are under tension, and a locking wire mounted in said plate designed to prevent the release of said means from the latter.

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

MILO N. EDWARDS.

Witnesses:

WILLIAM F. ROSENBERG,
THEODORE ROSENBERG.