No. 839,852. PATENTED JAN. 1, 1907.

H. H. IDE.

COLLAPSIBLE CRATE.

APPLICATION FILED FEB. 6, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

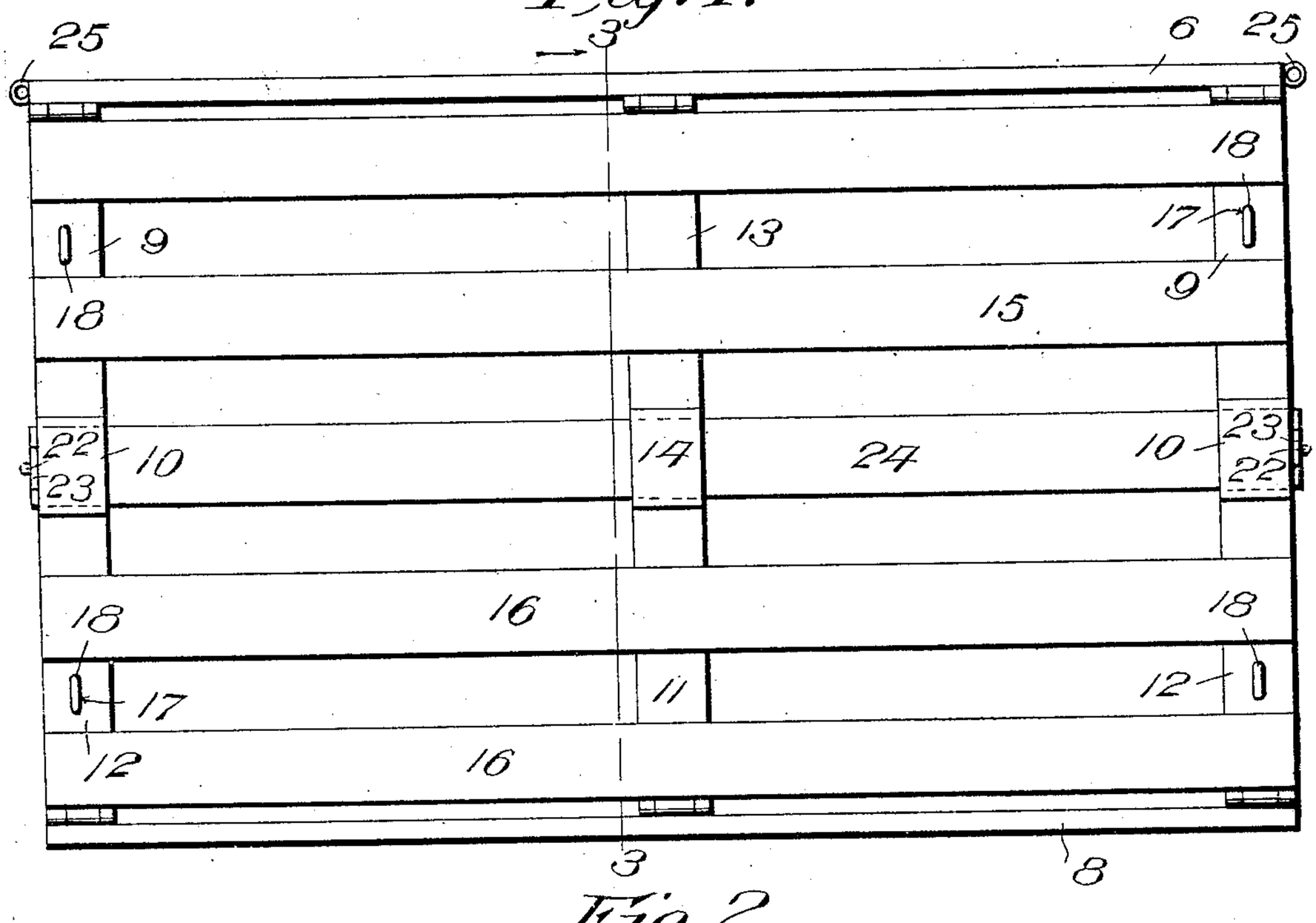


Fig. 2.

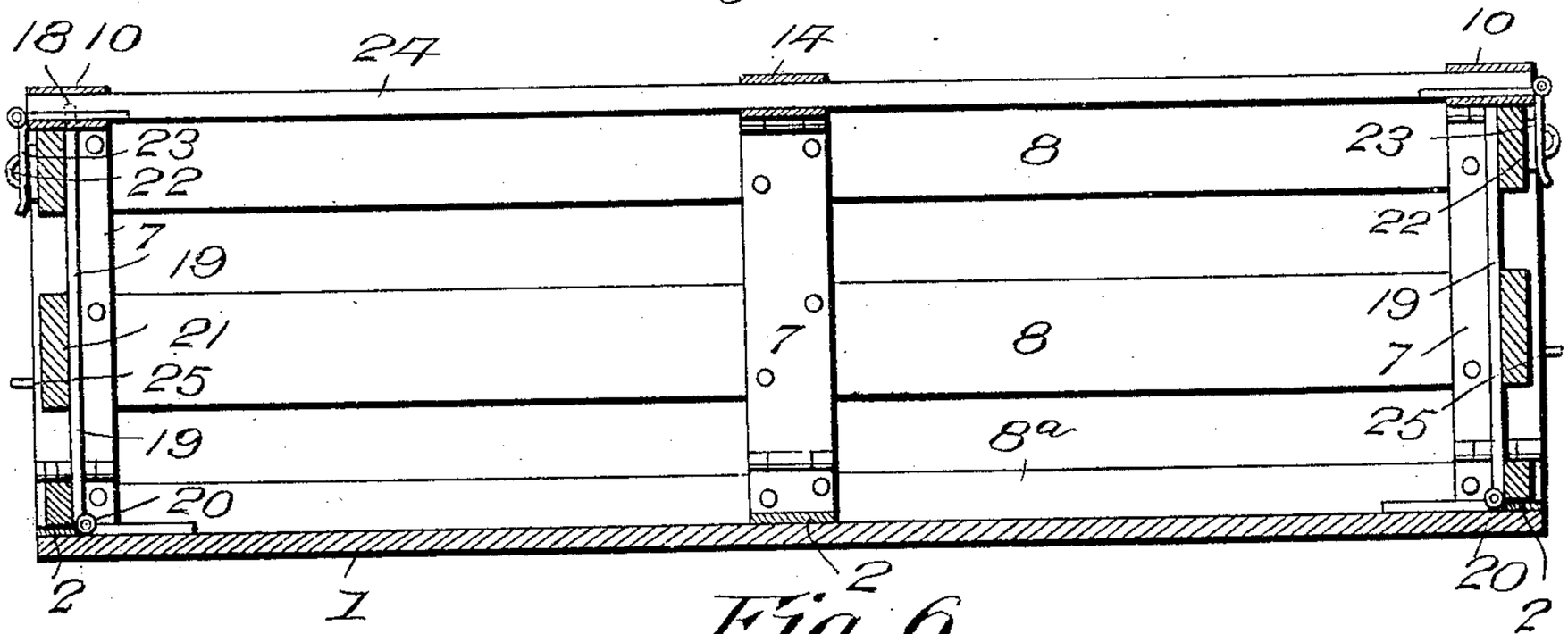
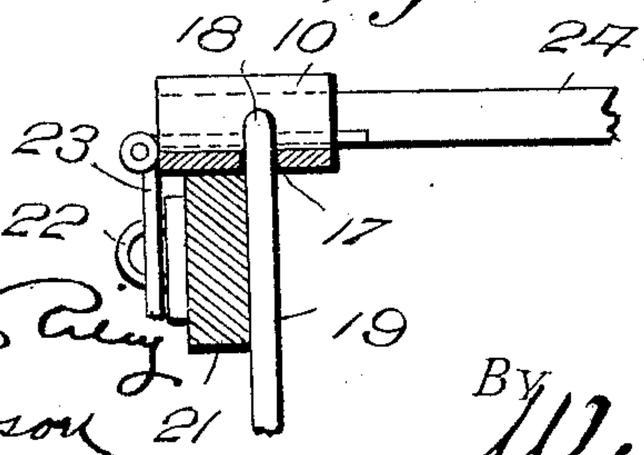


Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 3.

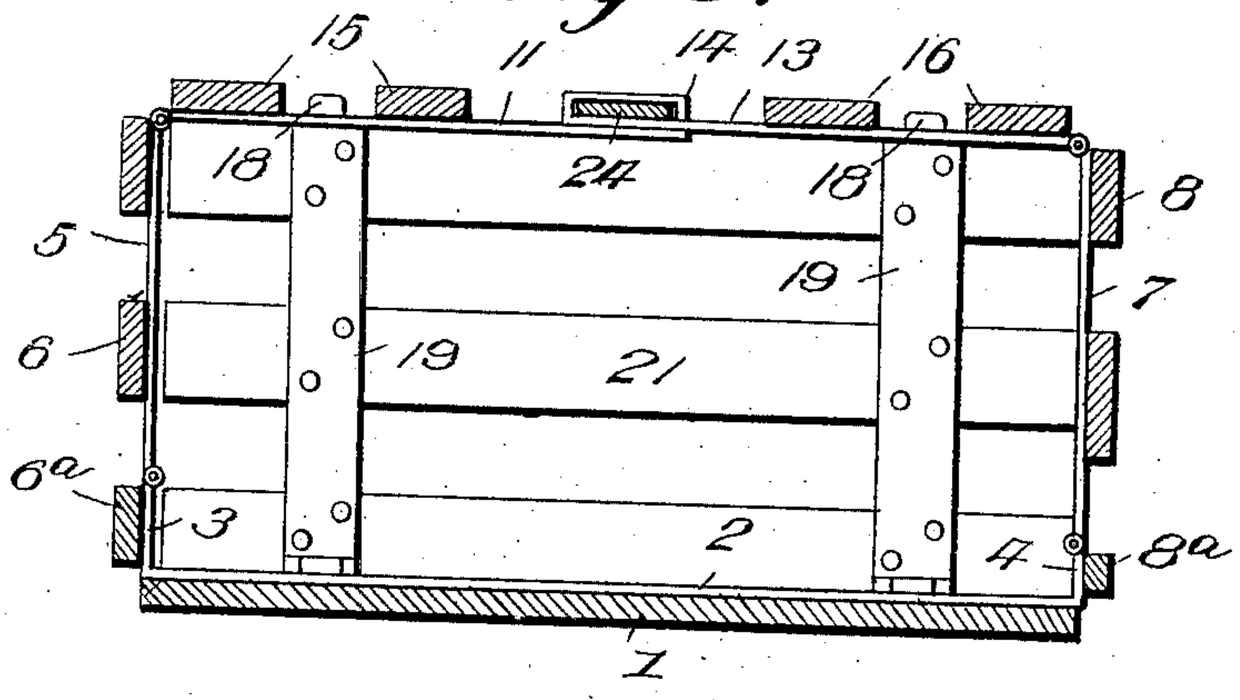


Fig. 4.

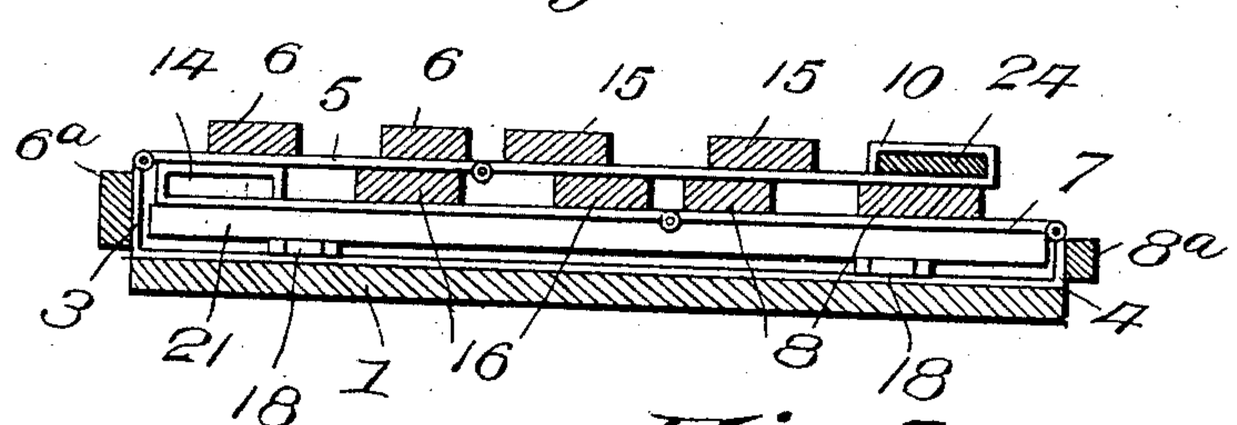
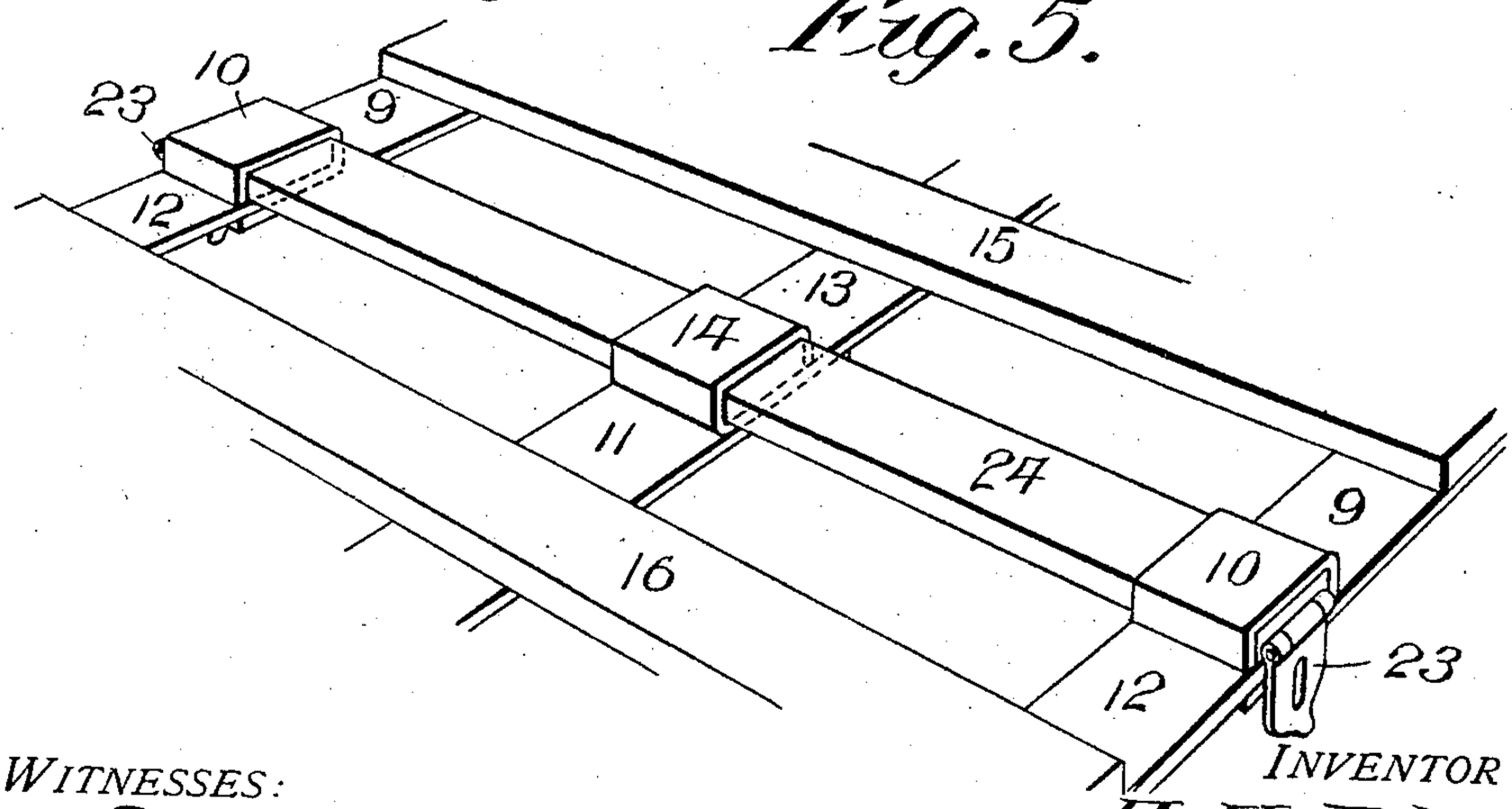


Fig. 5.



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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE CRATE.

No. 839,852. Specification of Letters Patent. Patented Jan. 1, 1907.

Application filed February 6, 1906. Serial No. 299,814.

To all whom it may concern:

Be it known that I, HENRY HARRISON IDE, a citizen of the United States, residing at Cornell, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Collapsible 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.

My invention relates to collapsible crates; and its object is to provide a device of this character which can be folded into a compact bundle and which has novel means for holding it when set up and when closed.

The invention consists of a base having straps secured thereto and extending thereacross, and each strap terminates in an angular extension, which constitutes one leaf of a hinge. Another strap is hinged to each of these extensions, and these extensions and the straps hinged thereto constitute side cleats, to which the side slats of the crate are fastened. Straps are also hinged to the upper ends of the side cleats and have top slats fastened to them, and these straps terminate in alining loops adapted to receive a locking-strip. End walls consisting of cleats hinged to the base and slats fastened on the cleats are adapted to close the ends of the crate, and the cleats of these end walls have tongues which engage the end top straps. The locking-strip is adapted to be fastened to the end walls in any desired manner.

The invention also consists of certain other novel features of construction and combination of parts, the preferred form whereof will be hereinafter clearly described, and pointed out in the claims.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a top plan view of the crate. Fig. 2 is a central vertical longitudinal section therethrough. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a view similar to Fig. 3 and showing the crate collapsed. Fig. 5 is an enlarged perspective view of the central portion of the top and showing the locking-strip in position thereon, and Fig. 6 is an enlarged vertical section through the upper portion of one of the end walls and the adjoining portion of the top and showing an end cleat engaging the top.

Referring to the figures by numerals of reference, 1 is a base having, preferably, three metallic strips 2 secured thereto and extending transversely thereof, each strap terminating at its ends in upwardly-extending brackets 3 and 4, the brackets 3 being of greater length than the brackets 4. Hinged to the brackets 3 are metallic straps 5, having parallel slats 6 permanently connected thereto and extending the full length of the crate. Another slat 6^a is fastened to the brackets 3, so as to complete one of the sides of the crate. Straps 7, similar to the straps 5, are hinged to the brackets 4, and these straps have parallel slats 8 permanently secured to them, and another slat 8^a is fastened to the brackets 4 to complete this side of the crate. Secured to the end straps 5 of the crate are top straps 9, which terminate in angular loops 10, which when the crate is set up lie along the vertical longitudinal center of the crate. The metallic strap 11, which is connected to the middle side strap on cleat 5, does not terminate in a loop, but instead is flat throughout its length and is adapted to extend just past the longitudinal center of the crate. Top straps 12, similar to the strap 9, are hinged to the end straps 7 of the crate, and a top strap 13, which is hinged to the intermediate strap 7 of the crate, terminates in a loop 14, which when the crate is set up alines with the loops 10. The straps 9 and 13 have slats 15 permanently connected to them, and slats 16 are also permanently connected to the straps 12 and 11. No slat, however, is secured to the ends of the top straps 9, 11, 12, and 13.

The end top straps 9 and 12 have openings 17 therein, into which project tongues 18, formed at the upper ends of cleats 19, which are hinged at their lower ends to the base 1, as shown at 20. Fastened to these end cleats are slats 21, said slats and cleats constituting the end walls of the crate. Keepers 22, preferably in the form of staples, are secured to the outer faces of the upper slats 21 at the centers thereof, and these keepers are adapted to engage hasps 23, hinged to the ends of a locking-strip 24, which is adapted to be inserted into the alining loops by placing the hasps in engagement with the staples and then fastening them in any desired manner. The lower slat 6 of the crate has staples 25 extending from its ends for a purpose hereinafter set forth.

When it is desired to set up the crate, the side and top portions thereof are swung upward, after which the end walls are swung into upright position. The top portions are

then swung downward, so as to allow the tongues 18 of end cleats 19 to extend into the openings 17. After the parts have assumed these positions the loops 10 and 14 will be in alinement. The locking-strip 24 is then inserted through the loops and the hasps 23 are secured to their keepers 22. The crate can therefore be shipped without being opened.

To collapse the crate the locking-strip 24 is first unfastened and removed, after which the end walls are folded upon the base, and the side slats 8 and top slats 16 are swung into position thereover. The other side and top section are then folded downward, after which the locking-strip 24 is inserted through the loops 10 and is held in place by securing the hasps thereon to the staples 25 on the lower slat 6.

What I claim is—

1. In a collapsible crate, the combination with a bottom having side and end walls connected thereto and adapted to fold thereon; of tongues upon the end walls, cover-sections hinged to the side walls and adapted to be engaged by the tongues, loops formed with the cover-sections and adapted to aline, the middle loop being provided upon one of the cover-sections, while the end loops are provided upon the opposite cover-sections, and a locking-strip extending through the loops.

2. In a collapsible crate, the combination with a base having side and end walls connected thereto and adapted to fold thereon; of straps hinged to the side walls and adapted to overlap at their meeting ends, said straps terminating in loops adapted to aline, the loop of the middle strap being opposed to the loops of the end straps, a locking-strip seated within said loops, and means for securing said strip within one of the loops when the crate is either set up or collapsed.

3. In a collapsible crate, the combination with a base having straps secured thereto and terminating in brackets; of side straps hinged to the brackets, top straps hinged to the side straps and adapted to overlap at their meeting ends, said straps terminating in loops adapted to aline, the loop of the middle strap being opposed to the loops of the end straps, slats secured to the straps and brackets and constituting the side walls and cover-sections of the crate, end walls hinged to the base, and means for engaging the loops to lock the cover-sections upon the end walls.

4. In a collapsible crate, the combination with a base having straps secured thereto and terminating in brackets; of side straps hinged to the brackets, top straps hinged to the side straps and adapted to overlap at their meeting ends, said straps terminating in loops adapted to aline, the loop of the middle strap being opposed to the loops of the end straps, slats secured to the straps and brackets and constituting the side walls and cover-sections of the crate, end walls hinged to the base, tongues upon the end walls adapted to engage the top straps, and a securing-strip adapted to be seated within the loops to lock the cover-sections upon the end walls.

5. In a collapsible crate, the combination with a base having straps secured thereto and terminating in brackets; of side straps hinged to the brackets, top straps hinged to the side straps and adapted to overlap at their meeting ends, said straps terminating in loops adapted to aline, the loop of the middle strap being opposed to the loops of the end straps, slats secured to the straps and brackets and constituting the side walls and cover-sections of the crate, end walls hinged to the base, tongues upon the end walls adapted to engage the top straps, a securing-strip adapted to be seated within the loops to lock the cover-sections upon the end walls, and means for securing the locking-strip to the end walls.

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

HENRY HARRISON IDE.

Witnesses:

J. E. SHACKUKET,

NELSON LINDQUIST.