

R. L. PICKERING.

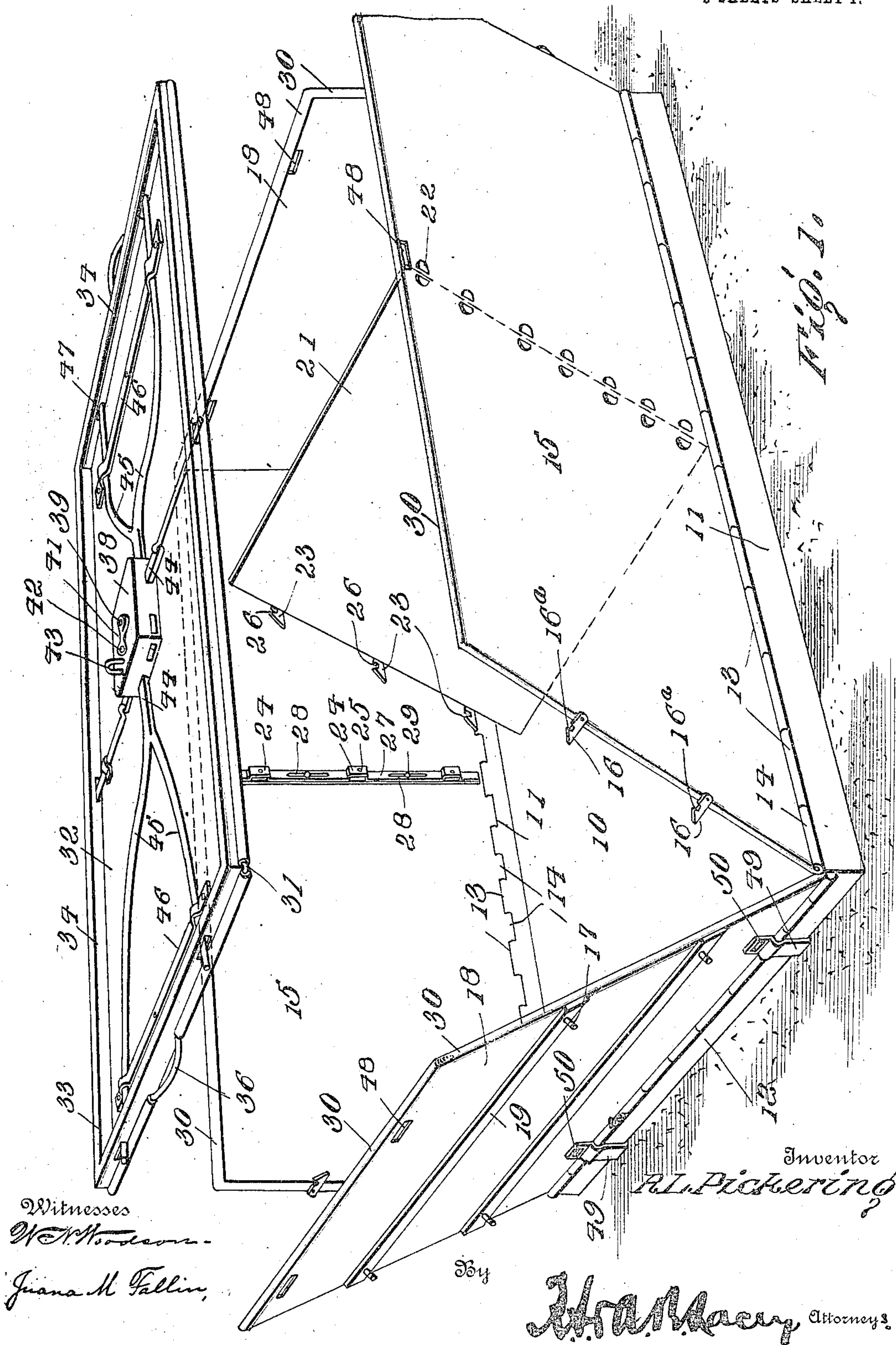
FOLDING CRATE.

APPLICATION FILED MAR. 18, 1910.

Patented June 20, 1911.

2 SHEETS—SHEET 1.

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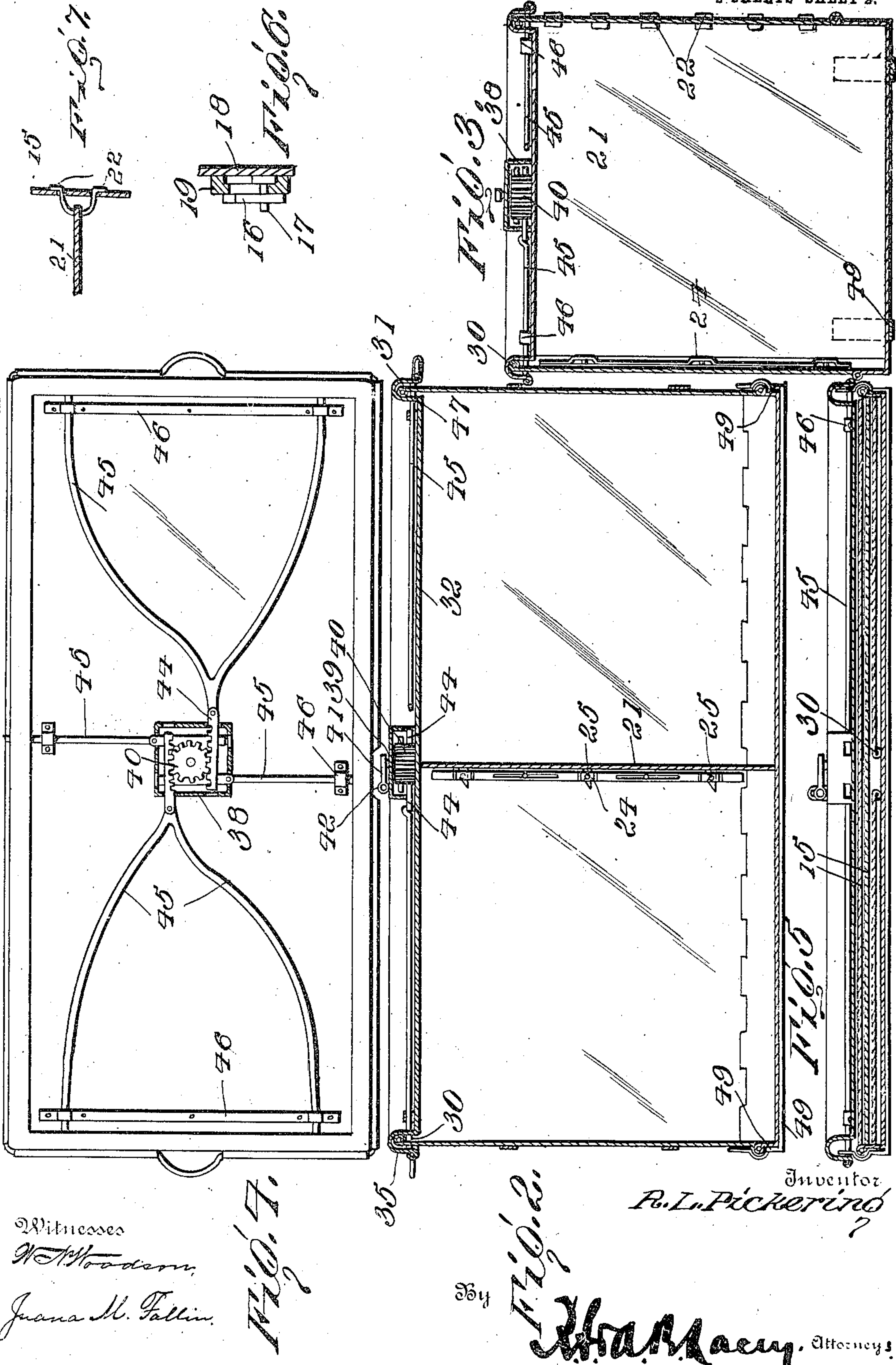
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# UNITED STATES PATENT OFFICE.

RUBEN L. PICKERING, OF FALLING SPRING, WEST VIRGINIA.

## FOLDING CRATE.

995,712.

Specification of Letters Patent. Patented June 20, 1911.

Application filed March 18, 1910. Serial No. 550,222.

*To all whom it may concern:*

Be it known that I, RUBEN L. PICKERING, citizen of the United States, residing at Falling Spring, in the county of Greenbrier and State of West Virginia, have invented certain new and useful Improvements in Folding Crates, of which the following is a specification.

This invention relates to crates of the folding or knockdown character, and has particular reference to an improved crate formed of sheet metal.

An object of this invention is to form a crate which is held together by one fastening device, and in which the movable sections are released from one another by unlocking the fastening device to admit of the folding of the crate.

Another object of this invention is to provide the cover of the crate with a peculiar fastening means which secures the cover in position over the upper edge of the crate and serves as a reinforcement for the body of the device.

The invention has for a further object to provide a knockdown crate with fastening means which can only be released by the removal of the cover, and in which the cover is provided with independent locking means for holding the same in position upon the crate.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a perspective view of the crate disclosing the sections detached from one another. Fig. 2 is a longitudinal section through the crate in a set-up position. Fig. 3 is a transverse central section through the crate. Fig. 4 is a top plan view of the same partly in section. Fig. 5 is a longitudinal section through the crate in a folded position. Fig. 6 is a detail sectional view of the fastening means. Fig. 7 is a detail view through one of the hinged supports for the partition.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings the numeral 10 designates the base which is formed of a sheet of metal having side flanges 11 and

end flanges 12. The side flanges are provided with a plurality of overturned tongues 13 which are disposed in spaced relation upon their upper edges to interfit with a corresponding plurality of tongues 14 which are carried upon the lower edge of each of the sides 15. The sides 15 are each provided at their ends with latches 16 having notches 16<sup>a</sup> formed in the upper edges thereof. The latches 16 are mounted against the ends of the sides 15 to engage beneath studs 17 which are mounted against the outer faces of the ends 18. The ends 18 are provided with reinforcing strips 19 across their outer faces and in registration with the latches 16. From Fig. 6 it will be observed that the strips 19 are apertured to receive the studs 17 and to admit of a limited vertical play of the same to ride over the inclined faces of the latches 16. The heads of the studs 17 are seated within the inner faces of the strips 19 and against the ends 18. A partition 21 is secured at one end against the inner wall of one of the sides 15 and midway of the ends of the same. Metallic straps 22 are secured through the partition 21 and the side 15 supporting the same having their free ends turned over against the outer face of the side 15. The straps 22 thus form a hinged joint for the partition 21.

The opposite edge of the partition 21 is provided with a plurality of spaced latches 23 which extend laterally therefrom and engage within keepers 24. The keepers 24 are carried against the inner face of the opposite side 15 and serve to lock the partition 21 in position. The keepers 24 are formed from a strip of metal which is provided with spaced offset portions to which are secured pins 25 to seat within notches 26 formed in the upper edges of the latches 23. The strip 27 from which the keepers 24 are formed is provided with longitudinal slots 28 to receive studs 29 for retaining the strip 27 in position. The strip 27 is thus permitted to reciprocate vertically in order to raise the pins 25 out of the notches 26.

The edges of the sides 15 and the ends 18 are overturned, as at 30, to receive there-through a brace-rod 31.

The crate is provided with a cover which is formed from sheet metal and which carries about its edges a socket 33 for the reception of the upper edges of the crate.



The sheet of metal from which the cover 32 is formed is flanged upwardly at its outer edges as at 34 to engage against the inner faces of the beads 30. The flange 34 carries  
 5 a returned portion 35 which engages against the outer faces of the sections of the crate. The returned portion 35 is reinforced by the formation of a bead 36 upon the lower edge thereof in which a brace-wire 31 is posi-  
 10 tioned. The flange 34 and the returned portion 35 form the socket 33.

A housing 38 is positioned upon the upper side of the cover and centrally of the same through which is rotatably disposed a  
 15 shaft 39. The shaft 39 carries within the housing 38 a spur gear 40 which is keyed to the same and rotated through the medium of a crank-arm 41. The crank-arm 41 is located upon the upper end of the shaft 39  
 20 above the housing 38 and is provided with an aperture 42 for coöperation with a cleat 43 for locking the shaft 39 from rotation. A pad-lock or other suitable fastening is employed in connection with the arm 41 and  
 25 cleat 43. The housing 38 is provided with a number of rack-bars 44 which are slidably disposed therethrough in overlapped relation and engaged against the sides of the gear 40. The outer ends of the rack-bars  
 30 44 extend beyond the sides of the housing 38 and merge into sliding bolts 45 which are carried by the cover. The sliding bolts 45 comprise lengths of heavy wire or metallic rods which are held in position by straps  
 35 46. The straps 46 are upon the upper face of the cover 32 adjacent the socket 33 in order to support the bolts 45 adjacent thereto. The sliding bolts 45 are adapted to move outwardly through openings 47 which are  
 40 formed in the flange 34, and extend through registered openings 48 which are formed in the sides 15 and ends 18 immediately beneath the beads 30.

The base 10 is provided with metallic straps  
 45 49 which are longitudinally arranged therebeneath and turned upwardly at their opposite ends and against said end-flanges 12. The straps 49 are disposed in registered relation with the sliding bolts 45 and are pro-  
 50 vided with openings 50 for the reception of the same when the crate is folded.

In setting up the crate the sides 15 are first raised outwardly when the ends 18 are raised into, and held in a vertical posi-  
 55 tion. The sides 15 are now swung inwardly against the extremities of the ends 18. The latches 16 engage the studs 17 and raise the same through the openings in the strips 19 to admit of the seating of the studs within  
 60 the notches 16<sup>a</sup>. The partition 21 is now swung into a transverse position within the crate to engage the latches 23 within the keepers 24. The beveled edges of the latches 23 raise the pins 25, sliding the strip 27  
 65 upwardly. When the pins 25 drop into the

notches 26 the weight of the strip 27 retains the same in such position. The body of the crate is thus held in a locked position. The cover 23 is now placed upon the upper  
 70 end of the crate engaging the socket 33 over the beads 30 when the arm 41 is rotated to force the rack-bars 44 outwardly under the action of the pinion 40 to slide the bolts 45 into locked position. The bolts 45 are moved  
 75 outwardly by the rack-bars 44 engaging through the openings in the flange 34 and into the openings 48 in the sides 15 and ends 18. It is thus seen that when in this position the cover cannot be removed and that  
 80 the sliding bolts 45 are reinforced by their passage through the flange 34.

Having thus described the invention what is claimed as new is:—

1. A crate including a base, sides hinged on said base, ends hinged on said base, se-  
 85 curing means disposed upon the meeting edges of said sides and said ends, a partition hinged to one of said sides, latches carried by the partition, keepers positioned against the inner face of the opposite side to receive  
 90 said latches for holding the body of the crate together, a cover positioned over the crate, a socket formed about the edges of said cover to receive the upper edges of said sides and said ends, and sliding bolts car-  
 95 ried by said cover for engagement through the socket and through the upper edges of said sides and ends.

2. A crate including a base, a plurality of hinged sections carried upon the base, in-  
 100 terlocking members carried at the meeting edges of said sections, means carried by one of the sections for securing the same in interlocked relation, a cover disposed upon the upper edges of said sections and having  
 105 a socket formed about the edge thereof to receive the upper edges of said sections, and means carried by the cover for engagement through the socket and through the upper edges of said sections.  
 110

3. A crate including a base, side and end walls hinged upon the base and having  
 spaced openings therethrough adjacent to their upper ends, a cover detachably engag-  
 115 ing over the walls and having a marginal socket to receive the upper edges of the walls, and sliding bolts carried by the cover and engaging through the socket and through the openings in the walls to hold  
 120 the same in position.

4. A crate including a base, side and end walls hinged upon the base, vertically mov-  
 able strips mounted upon the end walls and having outwardly extending studs adja-  
 125 cent their extremities, latches extending inwardly from the extremities of the sides for engagement beneath said studs, and a cover engaging over the walls and having a depending reinforced flange engaging over the  
 130 walls to retain the same in position.

5. A crate including a base, side and end walls hinged upon the base, a cover engaging over the upper edges of the walls and having depending flanges engaging against the outer face of the walls, sliding bolts carried upon the cover and engaging through the flange and the upper portions of the walls, and locking means carried by

the cover to actuate the bolts and to hold the same in a closed position at all times. 10

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

RUBEN L. PICKERING. [L. s.]

Witnesses:

N. S. BRUFFEY,

H. D. LITTLEPAGE.