No. 816,801. PATENTED APR. 3, 1906.

W. H. KELCHNER.

FOLDING CRATE.

APPLICATION FILED JUNE 20, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

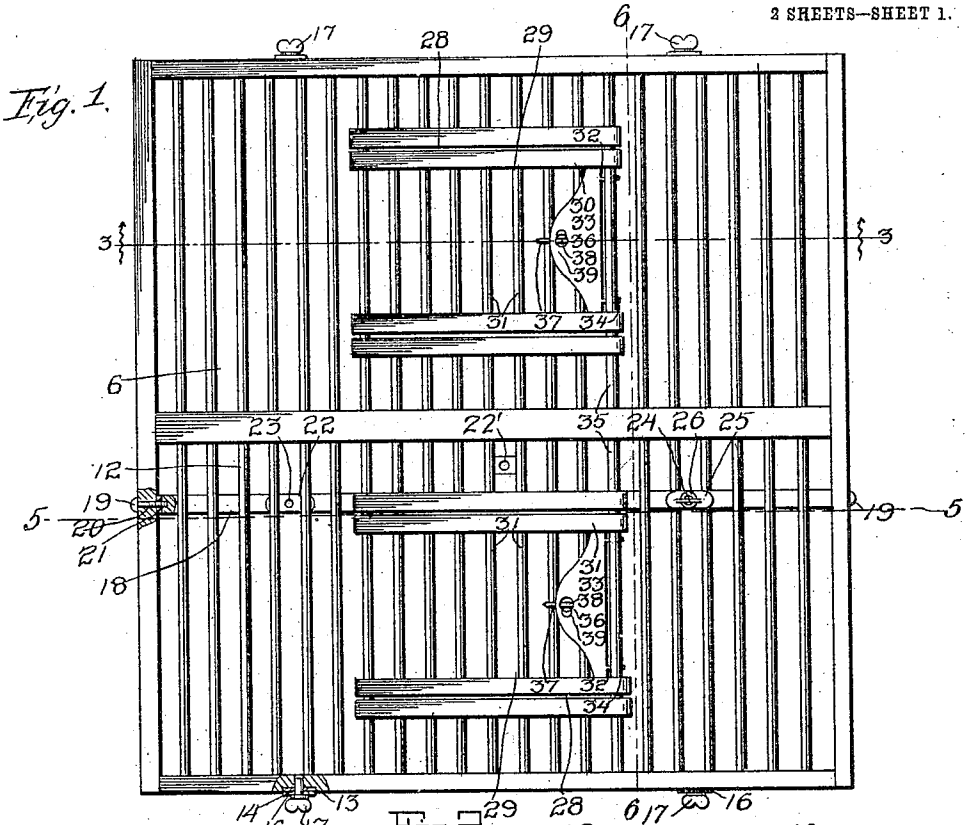


Fig. 2.

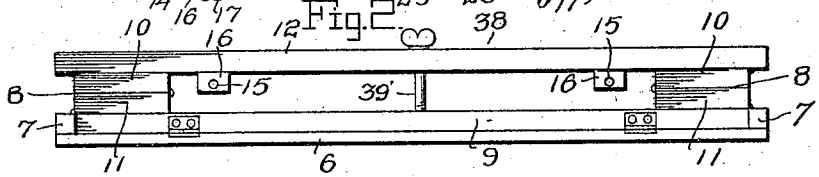
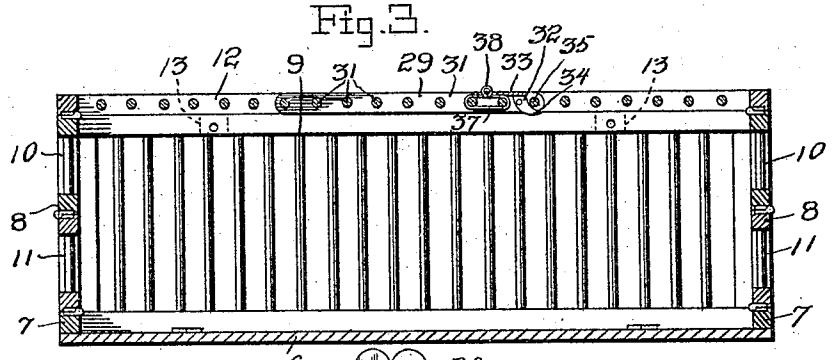


Fig. 3.



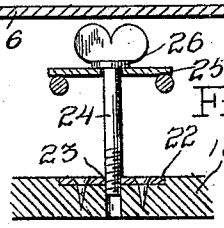


Fig. 4.

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2 SHEETS—SHEET 2.

Fig. 5.

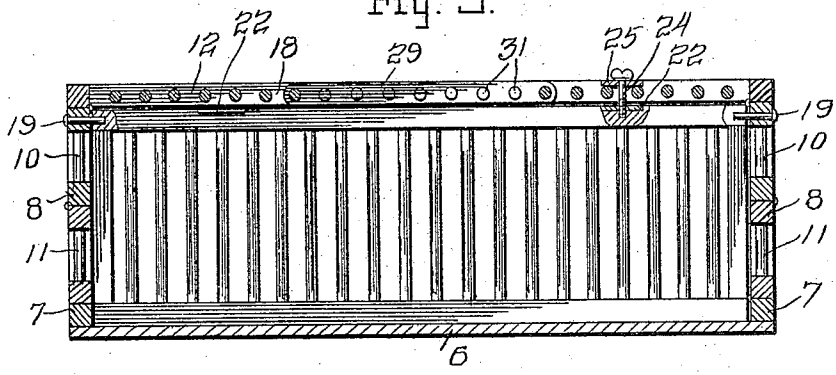


Fig. 6

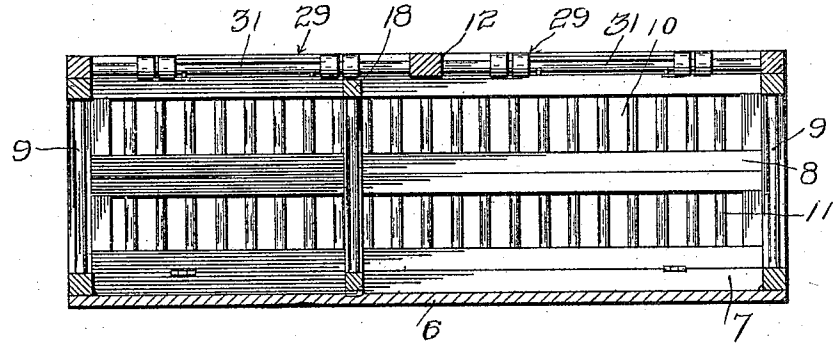
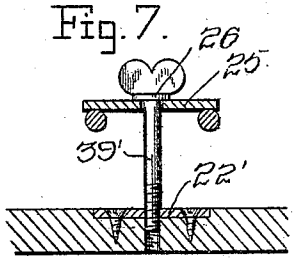


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY KELCHNER, OF NEW YORK, N. Y.

FOLDING CRATE.

No. 816,801. Specification of Letters Patent. Patented April 3, 1906.

Application filed June 20, 1904. Serial No. 213,381.

To all whom it may concern:

Be it known that I, WILLIAM HENRY KELCHNER, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Folding 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.

This invention relates to crates, and more particularly to those designed for shipping farm produce, and has for its object to provide a crate which will be strong and durable and which when empty may be folded to occupy a minimum of space during transportation.

A further object is to provide a closure for the crate so arranged that it may not be accidentally unfastened.

Other objects and advantages will be apparent from the following description, and it will be understood that modifications of the specific construction shown may be made and any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the crate. Fig. 2 is a side elevation of the crate folded. Fig. 3 is a sectional view of the closure and a portion of the crate, taken on line 3 3 of Fig. 1. Fig. 4 is a detail sectional view of one of the retaining-screws. Fig. 5 is a sectional view taken on line 5 5 of Fig. 1, showing the partition in elevation. Fig. 6 is a sectional view taken on line 6 6 of Fig. 1. Fig. 7 is a detail view, partly in section, showing the means for holding the crate in folded position.

Referring now to the drawings, the present invention comprises a bottom 6, at the opposite sides of which and flush with the edges thereof are secured sills 7, to which are hinged two of the side walls 8 of the crate, the remaining side walls 9 being hinged to the bottom adjacent to its remaining edges, the several walls being arranged to fold inwardly, in which position the walls 9 lie upon the surface of the bottom 6, the walls 8 lying upon the walls 9.

The walls 8 each consists of upper and lower longitudinally-hinged sections 10 and 11, respectively, and hinged to the upper edges of the sections 10 is the top 12 of the crate. The sections 10 and 11 are arranged to fold inwardly at their meeting edges, so that they are collapsible to permit the sections 11 to lie upon the walls 9, while the sections 10 lie upon the sections 11, the top resting upon the sections 10.

When the several walls are all unfolded and extend at right angles to the bottom 6 to form the complete crate, the walls 9 lie between the ends of the walls 8 and rest against the inner faces thereof, so that these walls are prevented from collapsing, and to hold the walls 9 in this position they are provided with plates 13, which are secured to their outer faces adjacent to their upper edges and which have threaded openings 14 therein, these openings being arranged for registration with openings 15 in brackets 16, which depend from the top 12, and with these registering perforations and openings are engaged screws 17.

Hinged to the bottom between the walls 9 and extending parallel thereto is a partition 18, which is movable to lie upon the bottom or to extend upwardly therefrom and lie with its ends against the walls 8 and with its upper edge against the under face of the top 12, in in which position it may be held by screws 19, which are passed through openings 20 in the walls 8 and which have their threaded ends engaged in the threaded perforations 21, which are secured to the ends of the partition 18.

The top and sides of the crate are each composed of suitable frames, in which are disposed a plurality of rungs, which are spaced from each other, as shown, and the partition 18 is provided with plates 22, having threaded perforations 23, which, when the partition is in operative position, register with spaces between the rungs, and engaged with these perforations are screws 24, having perforated plates 25 engaged therewith, these plates lying above and against the rungs, and the screws are provided with collars 26, which are secured thereto above the plates, so that the screws are operable to clamp the plates 25 against the rungs, thus holding the top and the partition together and bracing the crate.

The top 12 is provided with openings 28, having closures 29, each of which consists of spaced side pieces 30, having connecting-rungs 31, and pivoted to the inner faces of the side pieces 30 are the downwardly-extending ears 32 of a transversely-extending plate 33, which forms a portion of the fastening mechanism of the closure. The ears 32 extend

downwardly below the side pieces 30 and are provided with hooks 34, which extend forwardly, and the plate 33 is movable upon its pivot to bring these hooks into and out of engagement with the under side of the rung 35, which lies at the forward edge of the opening. The plate 33 is provided with a perforation 36, and engaged with a pair of the connecting-rungs 31 there is a wire 37, which is bent into the form of an upwardly-extending eye 38 for engagement with the perforation 36, and with the eye 38 there may be engaged a split key 39 to hold the plate with its hooks 34 engaged beneath the rung 35 to prevent movement of the closure into inoperative position, it being understood that the closures are hinged at their rearward ends to the top.

To hold the crate in folded position, a screw 39′, provided with a plate 25 and a collar 26, is disposed with its threaded end in a plate 22′, which is secured to the bottom and is operated to clamp its plate 25 against a pair of the spaced rungs.

What is claimed is—

A folding crate comprising a bottom, walls hinged to the bottom adjacent to opposite edges thereof and including upper and lower sections hinged at their meeting edges for movement of the sections to lie at times one upon the other and at times to lie in a common plane, said walls being movable to lie at times horizontal to the bottom and at times at right angles thereto, a top hinged to the upper sections of the walls and arranged to lie against said upper sections when the latter are in their folded positions, walls hinged to the bottom adjacent to its remaining edges, and arranged for movement to lie at times against the upper face of the bottom and at times to extend at right angles thereto, said second-named walls being disposed to lie between the end portions of the first-named walls when the second-named walls are in position to extend at right angles to the bottom to prevent movement of the first-named walls, depending members carried by the top, means engaging the sides and the depending members to hold the walls and top against movement with respect to each other, said top including a plurality of spaced members, a partition arranged within the closure of the first and second named walls for movement to lie upon the bottom or to extend upwardly therefrom, plates provided with screw-threaded openings carried by the said position, perforated plates disposed upon certain of the spaced members of the top and having thumb-screws engaged therein, the said screws being adapted for engagement in screw-threaded openings of the plates of the partition to hold the latter against movement, other means passed through opposite sides of the crate and piercing the said partition to aid in holding the latter against movement, a plate having a threaded perforation carried by the bottom, said plate being adapted to receive one of the aforesaid thumb-screws within its perforation when said thumb-screw is disengaged from its first-named plate and when the portions of the crate are in their folded position to hold said portions in such position, closures for the crate, and means for locking the closures in position, the said locking means including a swinging member.

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

WILLIAM HENRY KELCHNER.

Witnesses:
WALTER G. LANDON,
EDWARD T. KELCHNER.