(No Model.)

L. W. HORN & J. McARTHUR.

FRUIT CRATE.

No. 447,687. Patented Mar. 3, 1891.

Fig. 1.

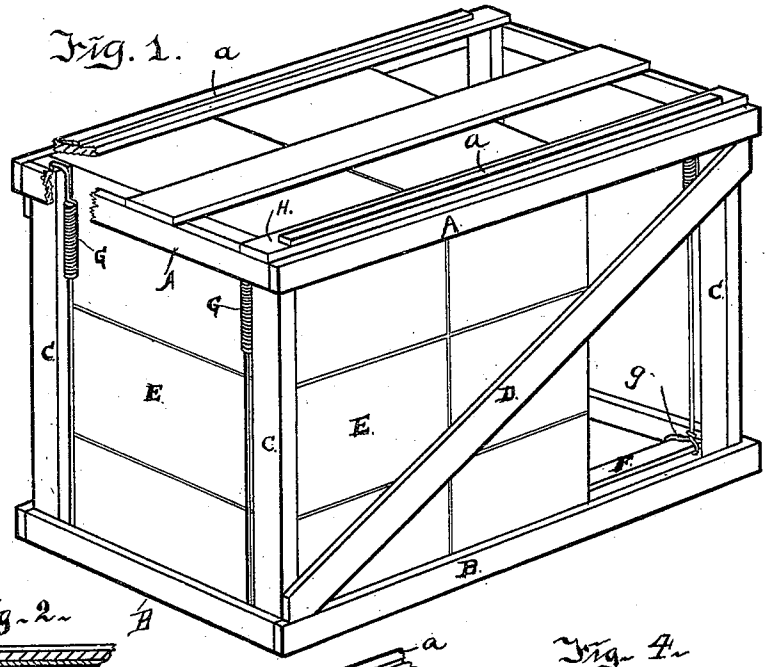


Fig. 2.

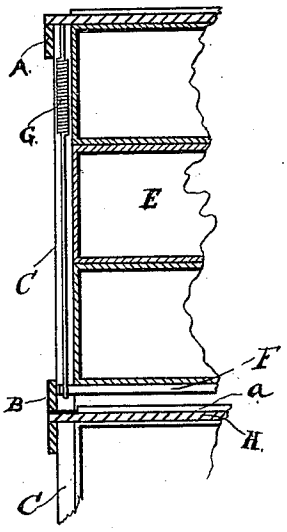


Fig. 4.

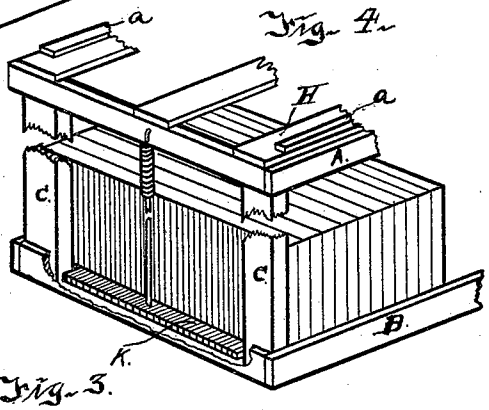


Fig. 3.

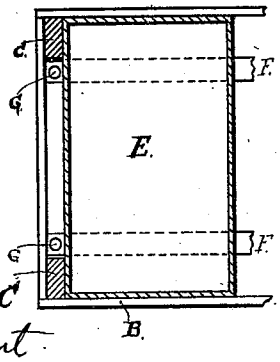
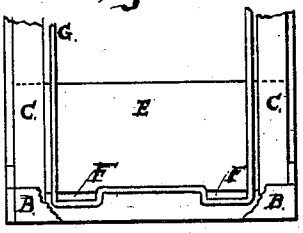


Fig. 5.



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LEWIS W. HORN AND JAMES McARTHUR, OF ROCHESTER, NEW YORK.

FRUIT-CRATE.

SPECIFICATION forming part of Letters Patent No. 447,687, dated March 3, 1891.

Application filed December 12, 1890. Serial No. 374,467. (No model.)

To all whom it may concern:

Be it known that we, LEWIS W. HORN and JAMES MCARTHUR, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Crates; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

Our invention relates to that class of crates especially adapted for shipping fruit and such articles in which the receptacles containing the goods are elastically supported; and it consists in certain novelties of construction and combinations of parts, all as hereinafter described, and the novel features pointed out in the claims, whereby not only will the crate be cheap and simple in construction, but the elastic or spring devices for supporting the tray holding the receptacles will be out of the way and in a space heretofore unoccupied.

In the drawings, Figure 1 is a perspective view of a crate constructed in accordance with our invention for containing three tiers of boxes, one tier being removed to show the construction more fully. Fig. 2 is a vertical sectional view; Fig. 3, a horizontal section, and Figs. 4 and 5 views of modifications.

Similar letters of reference indicate similar parts.

The body of the crate is composed of an upper frame A, a lower frame B, and the standards C at the corners, arranged, as usual, inside said frames A and B, the crate being further strengthened by the diagonal braces D. The fruit boxes or receptacles E are arranged within this crate and are usually of a length to extend from side to side and so proportioned with relation to the whole cubical contents of the crate as that the end tier will rest against the standards at the corners, as shown, leaving the only unoccupied space that between the end tiers of boxes and the ends of the frames A and B, being the thickness of the corner standards C C, and it is this space that we utilize for the accommodation and protection of the spring-supports for the boxes. Extending, preferably, lengthwise of the crate is a tray or movable bottom, preferably composed of two slats or bars F F, arranged on opposite sides thereof, with their ends projecting beyond the standards, as shown, and connected to the supporting-springs G, which latter are arranged entirely in the unoccupied space at the ends of the crate and connected at their upper ends, preferably, to the ends of the standards C by having said ends bent over and inserted therein, as shown in Fig. 1, though they could as well be connected to the top bars A in any other desired manner. These springs, of which we preferably employ four, are provided with the depending straight portion and are formed with loops *g* in their lower ends, in which the slats are inserted. The lower frame B is, it will be noted, sufficiently deep to allow the slight motion necessary to elastically support the tray and superposed boxes without displacement, and, further, sufficient space is permitted for the accommodation of the cleats *a a*, slightly shorter than the bottom frame B, which we prefer to place on the cover-boards H H of the crate, so that when the crates are placed on top of each other, as in Fig. 2, the upper ones will be prevented from sliding off or being accidentally displaced. These cleats could, it will be understood, extend across the top of the crate, if desired.

It will be noted that the springs supporting the fruit-boxes are located entirely within the extreme outer portion of the crate, and yet in such position that the carrying capacity is not interfered with in the least, they merely occupying space usually wasted or not utilized for any useful purpose.

Crates constructed in accordance with our invention are exceedingly simple in construction, and can be manufactured very cheaply, and are found in practice to be admirably adapted for the purpose, the fruit shipped in them being found in very much better condition than when shipped in crates of the ordinary construction, the springs serving to take up all the shock to which the boxes and contents would otherwise be subjected.

Instead of employing the two separate slats F F we can employ a single board or tray K having the ends projecting into the space represented by the thickness of the standards C,

before described, and employ only a single spring at each end, secured to said tray and to the cross-bars of frame A, all as shown in Fig. 4; but for cheapness we prefer the construction shown in the other figures.

In Fig. 5 we have shown a construction in which the loops for the two slats forming the tray are connected by a wire, serving to prevent the displacement of the slats, as will be understood.

We claim as our invention—

1. In a shipping-crate for fruit or similar material, the main crate composed of the upper and lower frames and the corner standards connecting them and forming guides for the fruit-boxes, the supporting-tray for the fruit-boxes, having the ends projecting endwise between the standards, and the suspending-springs connected to the tray ends and to the upper portion of the crate (as the end of the corner-post or upper frame) arranged wholly within the respective end sections of the frame, whereby the tray and contained boxes will be elastically supported and the springs will be protected and will not interfere with the carrying capacity of the crate, substantially as described.

2. In a shipping-crate for fruit or similar material, the main crate composed of the upper and lower frames and the corner standards connecting them and forming guides for the fruit-boxes, the supporting-tray for the boxes, composed of the two slats with their ends projecting endwise between the standards, and the suspending-springs connected at their lower ends, engaging the ends of the slats and connected at their upper ends to the upper portion of the crate (as the ends of the corner-posts or upper frame) and arranged wholly within the respective end sections of the frame, whereby the tray and contained boxes will be elastically supported and the springs will be protected and will not interfere with the carrying capacity of the crate, substantially as described.

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