L. & C. KRIECKHAUS.

FOLDING CRATE. Patented Mar. 11, 1884. No. 294,789. Hig.Z. Fig.3. F39.6. Fig.4. & Fig.5 Fig. 7. Attest; Louis Frieckhaus Charles Frieckhaus By Might Brog

United States Patent Office.

LOUIS KRIECKHAUS AND CHARLES KRIECKHAUS, OF ST. LOUIS, MISSOURI.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 294,789, dated March 11, 1884.

Application filed January 3, 1884. (Model.)

To all whom it may concern:

Be it known that we, Louis Krieckhaus and Charles Krieckhaus, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Folding Crates, of which the following is a full, clear, and exact description.

Our invention relates to those folding crates in which the sides and ends are hinged to fold down; and our improvement consists in the construction hereinafter described, and pointed

out in the claims.

In the drawings, Figure 1 is a perspective view of our improved crate, parts being removed to exhibit portions of the interior. Fig. 2 is a similar view, representing our crate in knockdown or folded condition. Figs. 3, 4, 5, 6, and 7 are portions of the crate, Fig. 3 showing the manner of connecting adjacent end posts in vertical position, Fig. 4 showing a side folded down, Fig. 5 showing a side and an end folded down, Fig. 6 showing the top applied to that shown in Fig. 5, and Fig. 7 showing the means and manner of securing the end of the top to the end post of a side, Figs. 3, 4, 5, and 6 being plan views, and Fig. 7 a vertical longitudinal section.

A represents the bottom of a crate; B, the sides, having end posts B2; C, the ends, hav-30 ing end posts C2; and D the top, having end pieces, D3, (formed with pin-holes D2 and D4,) and side pieces, D5. The posts of the sides are secured to the bottom by hinges B's and the posts of the ends are similarly secured 35 to the bottom by hinges C'. The sides and ends are thus hinged by their end posts to the bottom. The hinges of the sides are secured at the insides of the posts, so that they can be folded down inwardly and leave room 40 outside of them for the end posts of the ends, the end posts of the ends resting on the bottom, as well as the end posts of the sides. The top D is removable, and is held to the crate when in using position by pins D', inserted in 45 the holes D² in the end pieces, D³, and holes in the upper ends of the adjacent end posts. Thus, when the sides and ends are raised and the top put in position, as shown in Fig. 1, and the pins D' inserted, a rigid crate is formed, 50 and by simply pulling the pins out and removing the top the sides and ends can be folded

down, as described, and the top placed over them, as shown in Fig. 2, where it is held by the pins D' being inserted in holes D' of the end pieces of the top and into the holes of the end 55 posts of the sides. The pins thus secure the parts in folded condition as well as in their using position, and, being in use whether the crate is folded or not, are not liable to get lost. While the crate is being filled, the pins can be tem- 60 porarily placed in the adjacent end posts, to prevent any strain on the hinges. Boards C³ are preferably secured to the under side of the top, inside of the end pieces and between the side pieces, which, occupying a position be- 65 tween the tops of the adjacent posts of opposite sides of the crate, tend to strengthen the structure in addition to the pins. When the sides and ends are folded down, the boards occupy positions at rear of the ends. It will be seen 70 that in this construction of crate the end posts, when turned down, rest on their sides on the bottom, and that the space occupied between the top and bottom by the sides and ends is reduced to a height equal to the thickness of 75 an outside end post, and that the whole height of the crate is equal to the height or width of a side piece plus the thickness of the bottom.

- We claim as our invention—

1. In a folding crate, the combination of the bottom, the sides, the ends, and the top, the sides and the ends having end posts hinged to the bottom, to fold down with their sides and ends, and to rest on the bottom of the crate, 85 and the top having side and end pieces to surround the sides and ends of the crate, whether the sides and ends of the crate are in vertical or horizontal position, as set forth.

2. In a folding crate, the combination of the 90 bottom, the sides, the ends, and the top, the sides and ends having end posts formed with pin-holes and hinged to the bottom, to fold down with their sides and ends, and to rest on the bottom of the crate, and the top havoring side and end pieces to surround the sides and ends of the crate, whether the sides and ends of the crate are in vertical or horizontal position, the end pieces of the top having pin-holes in line with the pin-holes in the end 100 posts when the latter are in vertical position, and pin-holes in line with the pin-holes of the

end posts of the sides of the crate when the said sides and ends of the crate are folded down, as set forth.

3. In a folding crate, the top having side and end pieces and boards on its under side, inside of the end pieces and between the side pieces, in combination with a bottom and sides and ends having end posts and hinged to fold down inwardly, the said boards to occupy

either a position between the upper ends of ro the end posts on opposite sides, or when the crate is folded occupying positions on the outside of the ends of the crate, as set forth.

LOUIS KRIÉCKHAUS. CHARLES KRIECKHAUS.

In presence of—Geo. H. Knight,
Benjn. A. Knight.