

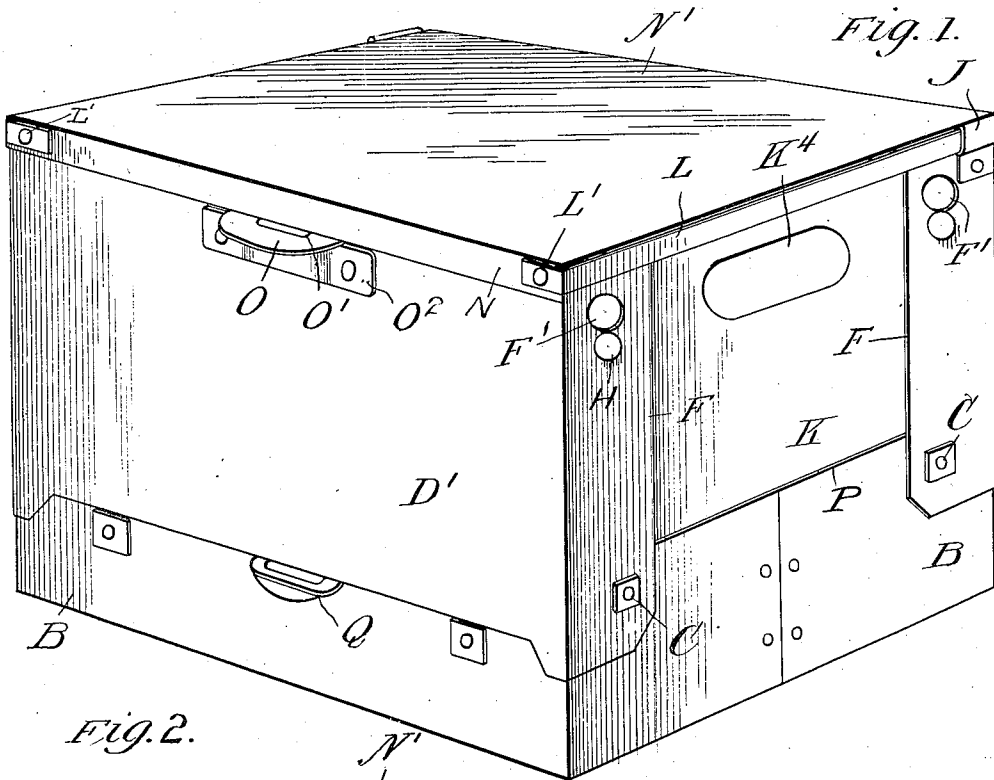
W. S. HOUSER.  
KNOCKDOWN BOX.

APPLICATION FILED JAN. 26, 1911.

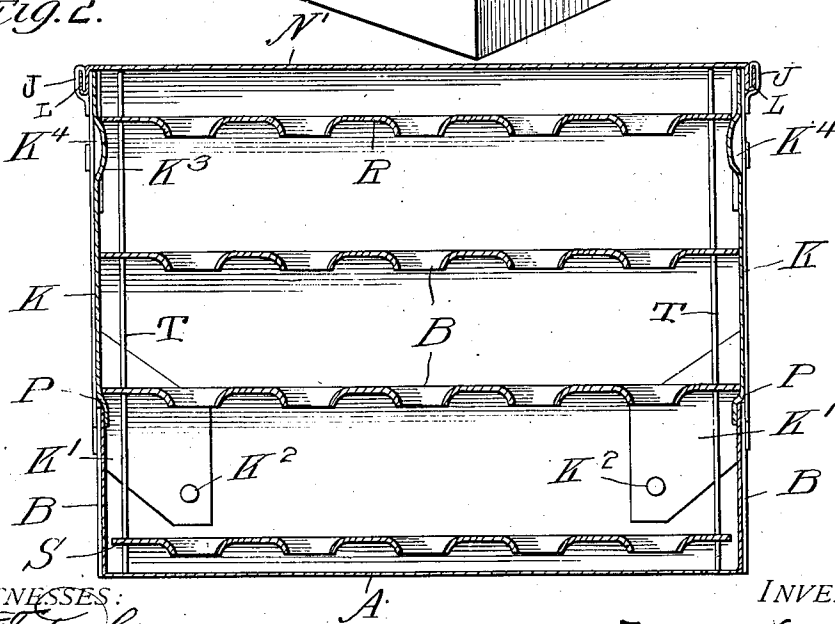
Patented Dec. 12, 1911.

1,011,794.

2 SHEETS—SHEET 1.



*Fig. 2.*



WITNESSES:

*H. F. Gayle*  
*A. R. Fowler*

BY

INVENTOR

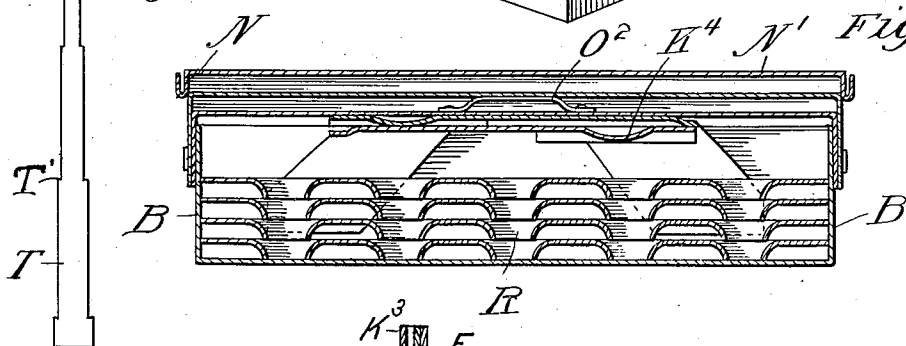
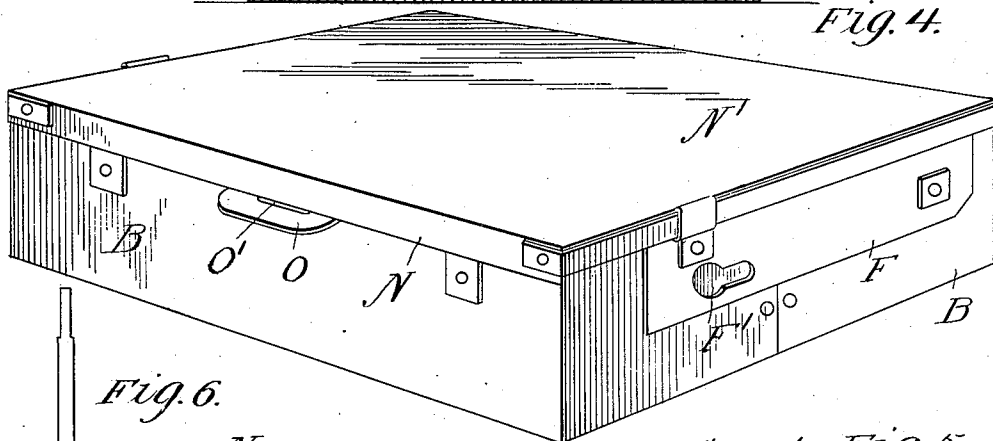
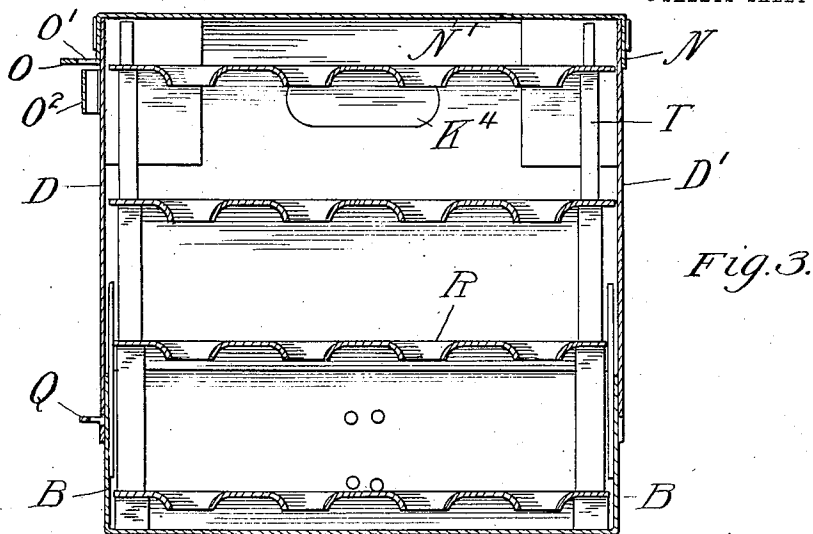
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2 SHEETS—SHEET 2.



WITNESSES

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FIG. 7.

BY

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# UNITED STATES PATENT OFFICE.

WINFIELD SCOTT HOUSER, OF DUBOIS, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO  
ALEXANDER BARCLAY, OF DUBOIS, PENNSYLVANIA.

## KNOCKDOWN BOX.

1,011,794.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed January 26, 1911. Serial No. 604,814.

*To all whom it may concern:*

Be it known that I, WINFIELD S. HOUSER, a citizen of the United States, residing at Dubois, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Knockdown Boxes; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in collapsible boxes or crates and so constructed that it may be readily knocked down for economizing space in storage or shipment.

The invention consists of various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claim.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a perspective view showing the box opened ready for use. Fig. 2 is a longitudinal sectional view through Fig. 1. Fig. 3 is a cross sectional view through the box. Fig. 4 is a perspective view showing it collapsed or folded. Fig. 5 is a sectional view through the box adjusted as shown in Fig. 4. Fig. 6 is a detail view showing a standard which is adapted to support the trays within the box or crate, and Fig. 7 is a detail sectional view through the slots in which a sliding button is mounted.

Reference now being had to the details of the drawings by letter, A designates the bottom of the box which has a surrounding flange B at right angles thereto and hinged upon the pivots C are the sides D and D', each of which has a flange F with an elongated slot F' therein provided to receive the sliding button or lug H which is fastened in a slot H' formed in the hinged end pieces K, which latter are provided with arms K' mounted upon the pivots K<sup>2</sup>, as shown clearly in Fig. 2 of the drawings. Each end has a shouldered portion P which, when the end is in an upright position, is adapted to extend over the upper edge of the flange B. Each of said end pieces K has a wing K<sup>2</sup>, which is bent parallel to the end and

serves as a means to prevent the inner end of the shank portion of the fastening buttons H from interference with material within the crate or box. Each end has an indenture K<sup>4</sup>, forming means in which the fingers of a person may be inserted to lift the crate.

Pivotaly mounted upon the flanges F, one at each end, is a hook J, and L designates a flange bent upon itself and having sliding engagement with said hook and has its ends bent about the corners of the top and fastened by rivets L' or any suitable means to the flanges N of the cover N'. By this means the cover is allowed to slide horizontally back into vertical position when it is desired to have access to the box or crate.

A plate O is fastened to the flange of the cover and is provided with an elongated slot O' therein, and O<sup>2</sup> designates a strap fastened to the wall or side of the box and Q designates a slotted plate secured to the flange about the bottom, said slotted plates and strap being provided with any suitable fastening means for holding the cover locked.

A series of partitions, designated each by letter R, is mounted within the box or crate and each partition is provided with a slot S adapted to receive the standards T, one of which is shown in Fig. 6 of the drawings and adapted to rest upon a shoulder T'. Each of the partitions has a distinct size of slot, the slot in each superimposed tray being of smaller dimensions in order to fit the corresponding shoulders shown in the detailed view, Fig. 6.

In opening up the crate from the compact form shown in Fig. 4 to the form shown in Fig. 1, the sides D and D' are folded to an upright position and afterward the ends swung also to upright positions with the buttons passing through the enlarged ends of the slots F', after which, by causing the buttons to slide into the contracted portions of the slots, the ends and sides will be securely held together. When the ends and sides are thus adjusted, it will be noted that the shouldered portion P of the ends fits over the flange B of the bottom, as shown clearly in Fig. 2 of the drawings, thereby making the outer face of the end and the flange B flush. The cover, by reason of its pivotal connection with the hook J, may be swung over the top and moved horizontally

to the position shown in Fig. 1. The various trays or shelves are adjusted in place by first inserting the standards T which are provided with steps or shoulders upon the opposite edges thereof and upon which the various trays rest. When the box or crate is folded, the trays rest one in contact with another, nesting together with the flanges about the apertures in the trays fitting one inside another.

What I claim to be new is:—

A collapsible box or crate, comprising a bottom with end and side flanges about the marginal edges thereof, sides with slotted flanges hinged to the end flanges of the bottom, ends hinged to the side flanges of the

bottom and having slots formed therein, the ends each provided with a wing which is bent upon itself, buttons, each having heads, one at each end thereof, and mounted in slots in the end and adapted to engage and have sliding movements within the slots in the flanges of the sides, one head of each button bearing against one of said wings, and designed to hold the sides and ends in open relation, as set forth.

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

WINFIELD SCOTT HOUSER.

Witnesses:

G. WOODRING,

ALEX. BARCLAY.