

(No Model.)

J. T. AIKIN.  
KNOCKDOWN CRATE.

No. 368,801.

Patented Aug. 23, 1887.

Fig. 1.

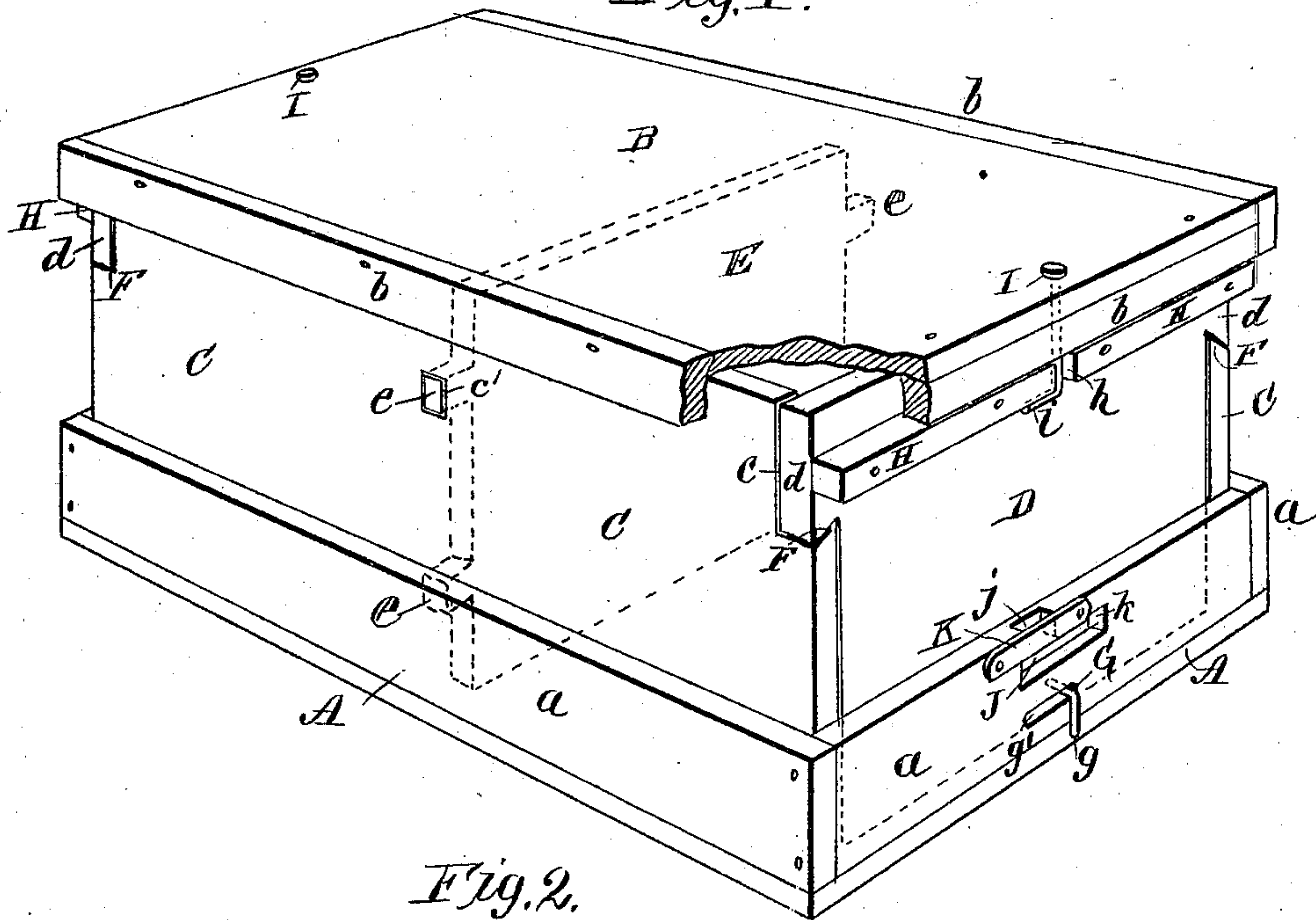
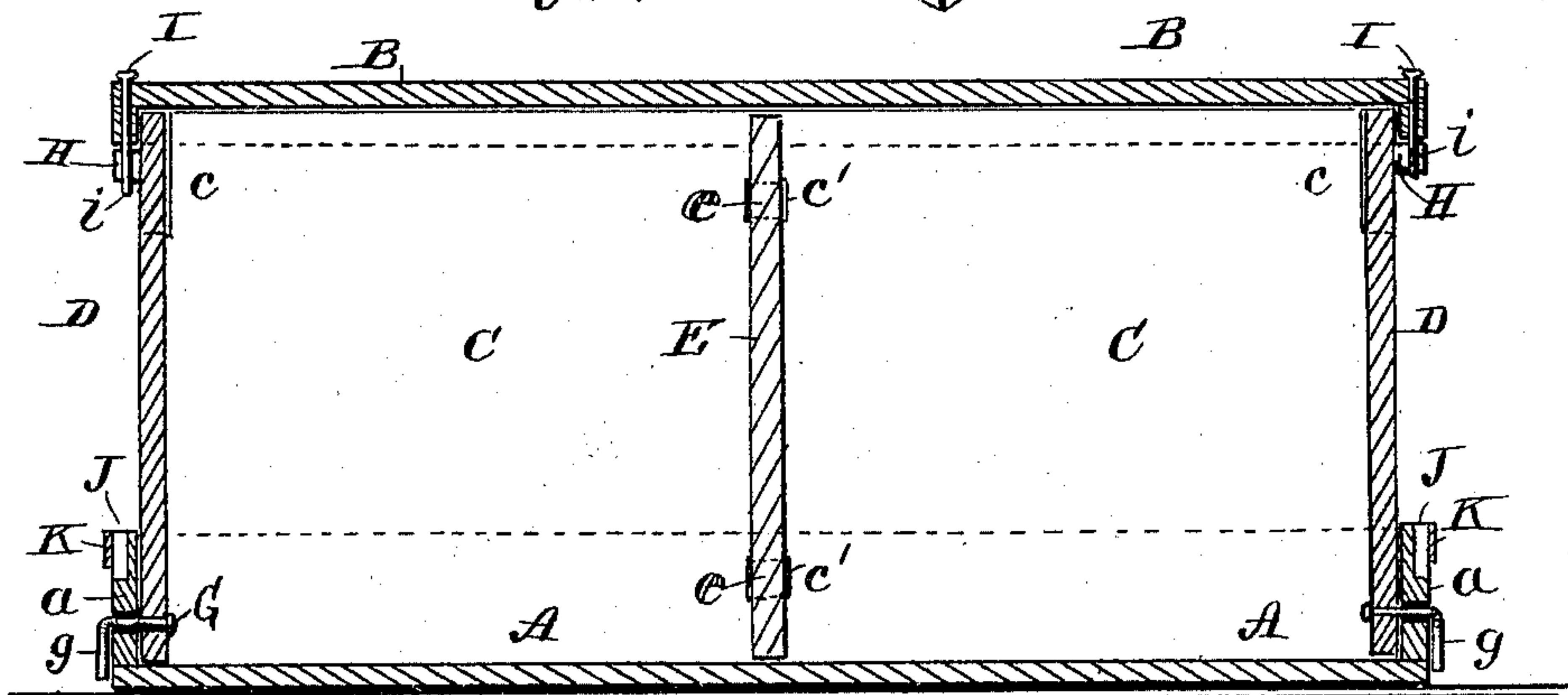
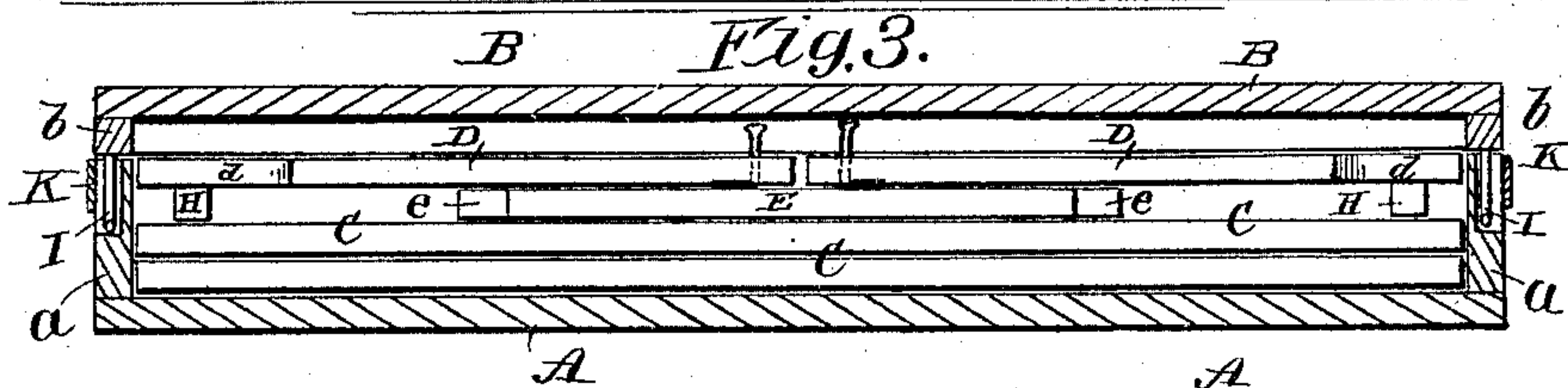


Fig. 2.



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN THOMAS AIKIN, OF PURDY, MISSOURI.

## KNOCKDOWN CRATE.

SPECIFICATION forming part of Letters Patent No. 368,801, dated August 23, 1887.

Application filed May 13, 1887. Serial No. 238,149. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN THOMAS AIKIN, of Purdy, in the county of Barry and State of Missouri, have invented a new and Improved Knockdown Crate, of which the following is a full, clear, and exact description.

My invention relates to crates used more especially for shipping produce, but adapted for shipment of general merchandise; and the invention has for its object to provide a simple, inexpensive crate which may be knocked down into comparatively small space for return to the shipper at reduced freight charges, and may be readily set up to form a substantial package for rough handling without injury.

The invention consists in certain novel features of construction and combinations of parts of the crate, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved crate, partly broken away and in section and as it appears when set up for use. Fig. 2 is a vertical longitudinal sectional elevation of the crate, and Fig. 3 is a longitudinal sectional view of the crate in knockdown condition.

The crate is made with a bottom part, A, having sides *a* and forming a shallow box, a top, B, having side strips, *b*, which rest upon the sides *a* of the bottom when the crate is in knockdown condition, opposite sides C C, opposite ends D D, and a middle transverse partition, E.

The crate sides C are cut away at the top at both ends, as at *c*, to receive upper overhanging or projecting portions, *d*, of the ends of the crate, which preferably lock onto the sides with a half-dovetail joint at F, which prevents spreading of the tops of the sides when the lower parts of the sides and the ends are set edgewise into the bottom part, A *a*, of the crate, as shown in Figs. 1 and 2 of the drawings. The fitting together of the sides and ends at *c d*, aside from the half-dovetail joints F, prevents falling inward of the upward parts of the ends D of the crate. The sides C have mortises *c'*, into

which tenons *e* on the ends of the partition E are passed to hold the partition in place, said partition being so adjusted before the ends D are fitted to the sides in the bottom of the crate.

Each end of the crate is provided with a headed pin, G, which is bent at a right angle to form a catch, *g*, which may be turned down at the outer face of the adjacent end *a* of the bottom part, A, after the catch is passed through a horizontal slot, *g'*, made in the part *a*, and whereby the ends of the crate will be held out snugly to the ends of the crate-bottom, as will be understood from Figs. 1 and 2 of the drawings.

Near the top of each end part, D, of the crate a cleat, H, is fastened horizontally, and may form a rest for the cover of the crate and handles to carry the crate by, and also provides for locking the cover to the set-up crate by means of headed pins I, which pass down through the cover and have right-angularly-bent ends *i*, which may be turned below the cleat at either side of a vertical slot, *h*, made in the cleat, and into which slot the body or main portion of the latch-pin I passes, as most clearly shown in Fig. 1 of the drawings.

At each end part, *a*, of the bottom A an L-shaped slot, J, is formed, and a metal plate, K, is preferably fastened to the end outside of the upper narrow portion, *j*, of the slot, which is about as long as the bent or locking end *i* of the cover-latch pin, so that when the crate is in knockdown condition, or with the sides C C, partition E, and ends D D packed upon each other within the bottom of the crate, the ends *i* of the cover-latches I may be passed through the narrow parts *j* of the slots J, and the cover will then be moved laterally to carry the parts *i* of the latches forward, to lock into the lower laterally-extending portions, *k*, of the slots J, to hold the cover tightly to the bottom of the crate, which, with all its parts, then occupies about one-third or one-fourth the space it fills when set up for use, as will be obvious from a comparison of Figs. 2 and 3 of the drawings. This allows return shipment of the crate at comparatively small expense, with evident advantages to the shipper and receiver of produce or merchandise usually shipped in packages of this general character.



If desired, the partition E may be fitted between cleats nailed in pairs to the opposite sides of the crate, or into shallow mortises made in the sides, and more than one partition may be used, or the partition may be dispensed with, as circumstances may suggest or require. Furthermore, the half-dovetail joints at F are not essential, as the lower ends or parts of the projections *d* of the crate-ends may be horizontal or square; but the dovetail joints are preferred, as they hold the crate sides and ends well together when the cover is off of the crate.

The crate when set up is very substantial and will bear much rough handling without injury, and withal the crate may be made cheaply and in any required sizes and of any approved materials.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A knockdown crate made with a bottom, A, a cover, B, sides C C, and ends D D, adapted to the bottom, and said ends fitted at their lower parts between the sides, and having projecting upper parts, *d*, which enter notches *c* of the sides, and latch devices holding the lower parts of the ends to the crate-bottom, substantially as described, for the purposes set forth.

2. A knockdown crate made with a bottom, A, a cover, B, sides C C, and ends D D, adapted to the bottom, and said ends fitted at their lower parts between the sides, and having projecting upper parts, *d*, which enter notches *c* of the sides, and form therewith interlocking dovetail joints F, and latch devices holding the lower parts of the ends to the crate-bottom, substantially as described, for the purposes set forth.

3. A knockdown crate made with a bottom,

A, a cover, B, sides C C, and ends D D, adapted to the bottom, and said ends fitted at their lower parts between the sides, and having projecting upper parts, *d*, which enter notches *c* of the sides, in combination with latch devices holding the lower parts of the ends to the crate-bottom, substantially as described, for the purposes set forth.

4. A knockdown crate made with a bottom, A, having slots *g'*, a cover, B, sides C C, and ends D D, adapted to the bottom, and said ends fitted at their lower parts between the sides, and having projecting upper parts, *d*, which enter notches *c* of the sides, and latches G, having hook ends *g*, and adapted to the slots *g'* and to lock outside of the bottom, substantially as described, for the purposes set forth.

5. A knockdown crate made with a bottom, A, having slots *g'*, a cover, B, sides C C, and ends D D, adapted to the bottom, and said ends fitted at their lower parts between the sides, and having projecting upper parts, *d*, which enter notches *c* of the sides, and form therewith interlocking dovetail joints F, in combination with latches G, having hook ends *g*, and adapted to the slots and to lock outside of the bottom, substantially as described, for the purposes set forth.

6. The combination, in a knockdown crate, of a bottom, A, having slots *g'* and J at each end, a cover, B, having hook-latches I *i*, sides C C, and ends D D, adapted to the bottom, and said ends having parts *d*, which enter notches *c* of the sides, and also having cleats H, notched at *h* to receive the latches I, substantially as described; for the purposes set forth.

JOHN THOMAS AIKIN.

Witnesses:

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