(No Model.)

J. C. MEEM.

KNOCKDOWN BOX OR CRATE.

No. 494,215. Patented Mar. 28, 1893.

Fig. 1.

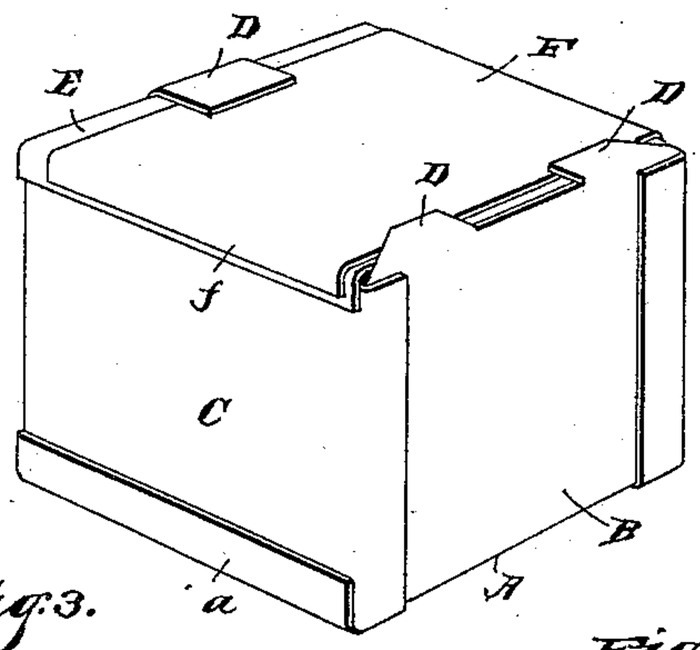


Fig. 2.

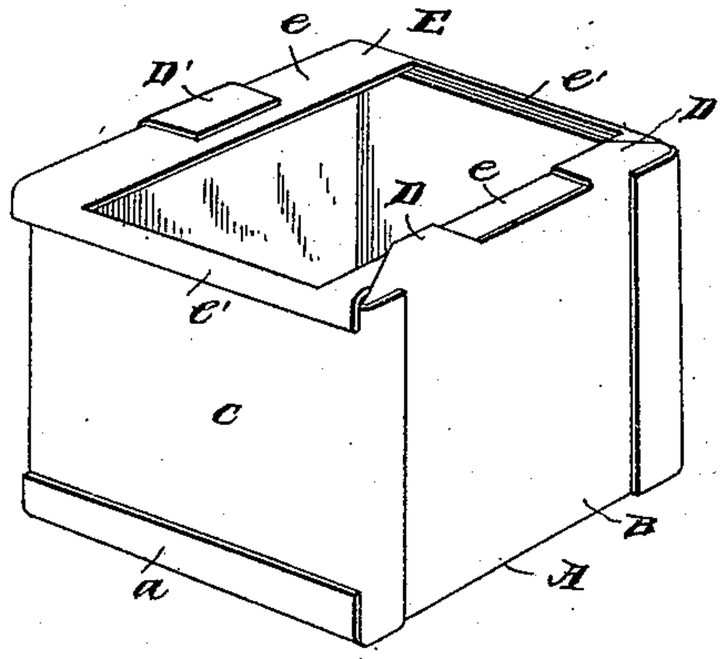
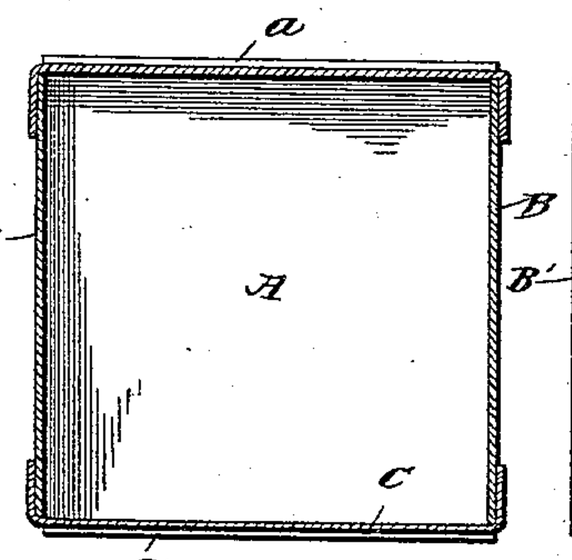


Fig. 3.

Fig. 4.



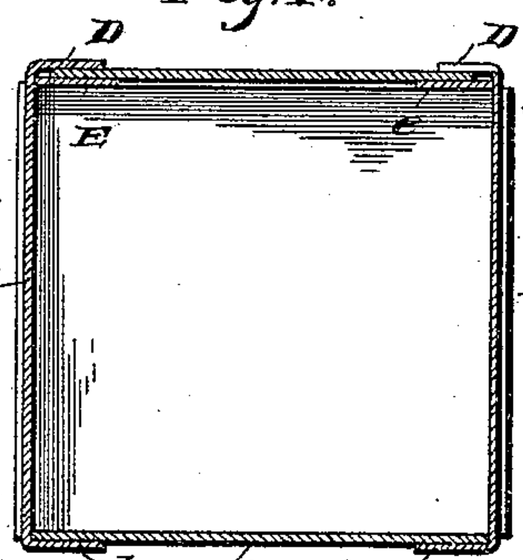


Fig. 5.

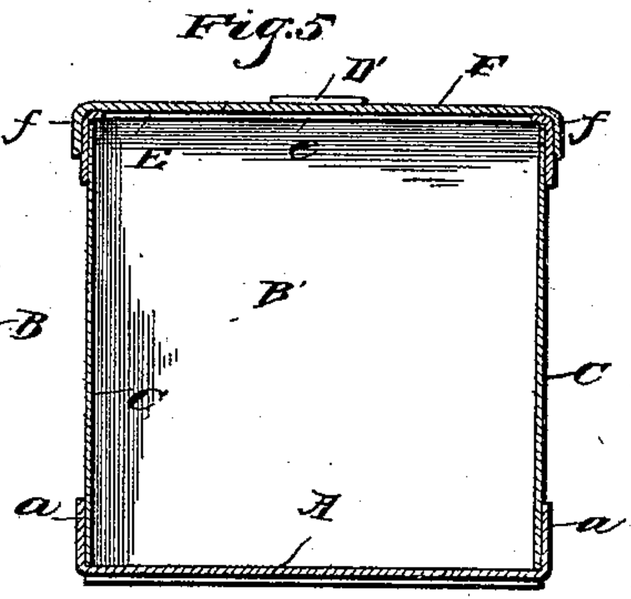


Fig. 7.

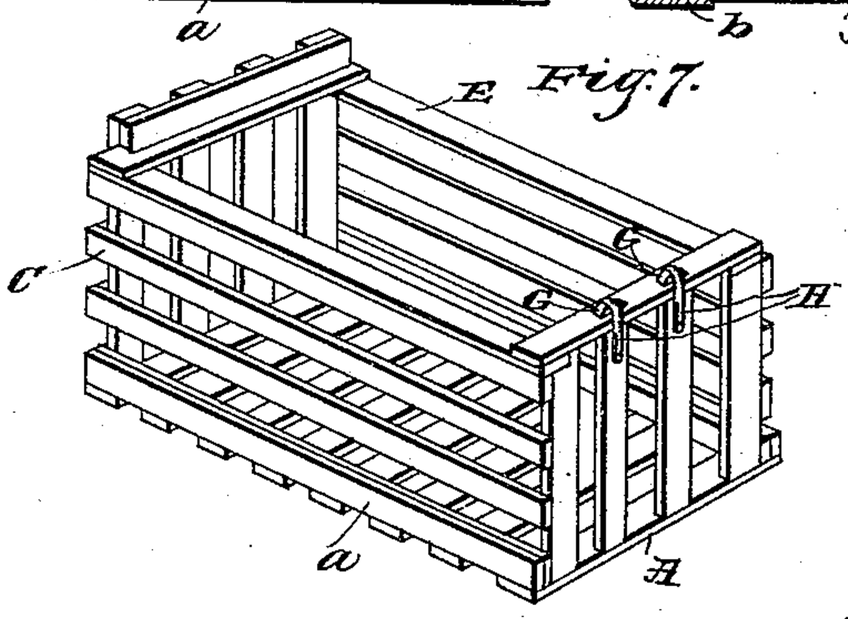


Fig. 8.

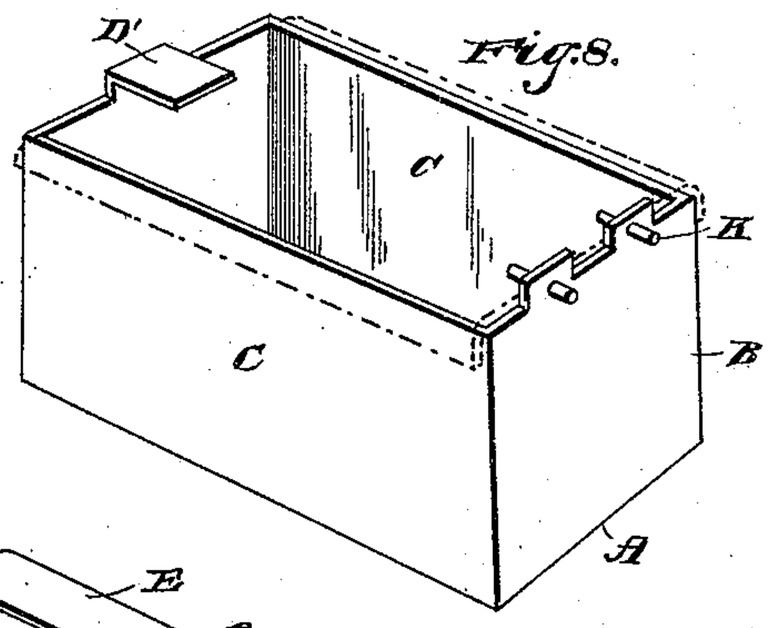
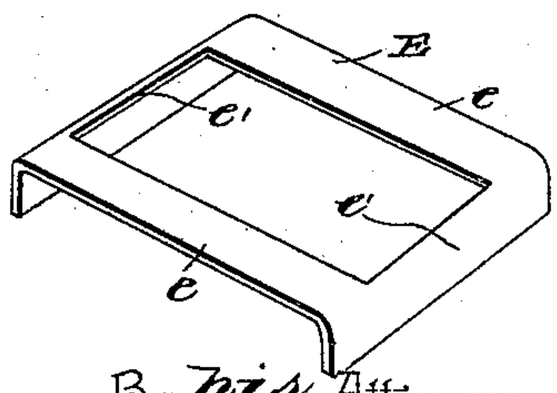


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES C. MEEM, OF BUENA VISTA, VIRGINIA.

KNOCKDOWN BOX OR CRATE.

SPECIFICATION forming part of Letters Patent No. 494,215, dated March 28, 1893.

Application filed June 22, 1892. Serial No. 437,614. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. MEEM, a citizen of the United States, residing at Buena Vista, in the county of Rockbridge and State of Virginia, have invented a new and useful Knockdown Box or Crate, of which the following is a specification.

My invention relates to improvements in knock-down boxes or crates, and has for its object to provide a simple, cheap, durable, and substantial box, which may be made of paste or card-board, tin, sheet-iron, celluloid, wood or other sheet material.

The construction of my improvement is fully described hereinafter in connection with the drawings, and the points of novelty are particularly specified in the appended claims.

In the drawings; Figure 1 is a perspective view of a complete box, constructed in accordance with my invention. Fig. 2 is a similar view with the top removed. Fig. 3 is a horizontal sectional view. Fig. 4 is a vertical sectional view. Fig. 5 is a similar view at right angles to Fig. 4. Fig. 6 is a detail view of the key. Fig. 7 is a perspective view of a crate showing a slightly different manner of securing the key in place. Fig. 8 shows a crate the key or cover of which is locked in place by a pin passed through a perforation in one of the end pieces and engaging the key.

A represents the bottom of the box, B B′ the ends, C C the sides, and F the top, or cover. The side edges of the bottom are turned up to form vertical, or perpendicular flaps, *a a*, which bear against the outer surfaces of the sides, C C, respectively. The lower edges of the ends, B B′, are turned under or provided with perpendicular flaps, *b b*, which engage and bear upon the outer surface of the bottom. The side edges of the sides are bent to form perpendicular flaps, *b b*, which engage and bear against the outer surfaces of the ends. The upper edge of the end, B, is provided with ears, D D, and the upper edge of the end, B′, is provided with the tongue, D′, said ears and tongue being bent inwardly over the box, as shown in Fig. 2.

E represents the key, which is in the form of a hollow square, or rectangular, the end bars, *e e* of which being horizontal, and the side-bars, *e′ e′*, of which being vertical, as shown, whereby when in position upon the upper side of the box the said side-bars engage and bear against the outer surfaces of the sides of the box, and the end-bars engage under the ears, D D and tongue, D′, respectively. The top, or cover, F, is provided at its side edges with depending flaps, *f f*, which engage and bear against the outer surfaces of the sides of the box, the end edges thereof being adapted to be engaged by the ears and tongue, above-described. It will be seen that the key holds the entire box in shape, and that if it is removed by raising the tongue, D′, all the members of the structure will be released.

Each member of the box is provided with two opposite upturned flaps or flanges, which engage diametrically opposite sides of the box, the exception being in the case of the ends which at one edge engage the bottom and at the other edge engage the key.

It will be seen that no securing devices are needed in a box or crate constructed in accordance with my invention.

Where made of strips, as a crate for vegetables, fruit, &c., the flaps or flanges are formed by transverse strips attached to the edges of the members.

In Fig. 7 I have shown a slightly different manner of securing the key in place, namely: G G are knobs or projections upon the upper surface of the key and H H are pivoted hooks to engage said knobs, the hooks being attached to one of the ends of the crate and the opposite edge of the key being engaged by an ear or tongue upon the opposite end piece.

Fig. 8 illustrates still another manner of securing the key in place, namely: by a pin K passed through a perforation in the upstanding edge of one of the end pieces, the opposite edge of the key being engaged as in Fig. 7.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a box or crate of the class described, the combination with the opposite end sections, the side-edges of which are inwardly bent, the bottom-section having its ends struck up to embrace the end-sections, and the side sections having their lower ends bent under the bottom, of the open locking-frame having its opposite ends downwardly bent to embrace the end-sections and its side-edges embraced by the upper bent edges of the side-

sections, and the cover surmounting the locking-frame and covering the opening therein, said cover having its opposite ends downwardly bent similar to and embracing those of the locking-frame, and its opposite side-edges overlapped by the upper inwardly bent edges of the side sections, substantially as specified.

2. A knock-down box comprising a bottom having upturned side edges, the sides having upturned end edges, the ends having upturned lower edges and provided at their upper edges, respectively, with ears D D and tongue, D′, the open key-frame E engaging said ears and tongue and provided with side flanges, and a cover surmounting the key-frame, engaged by the ears D D and having its ends embracing two of the opposite walls of the box, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES C. MEEM.

Witnesses:
W. B. HENLEY,
E. LEE.