

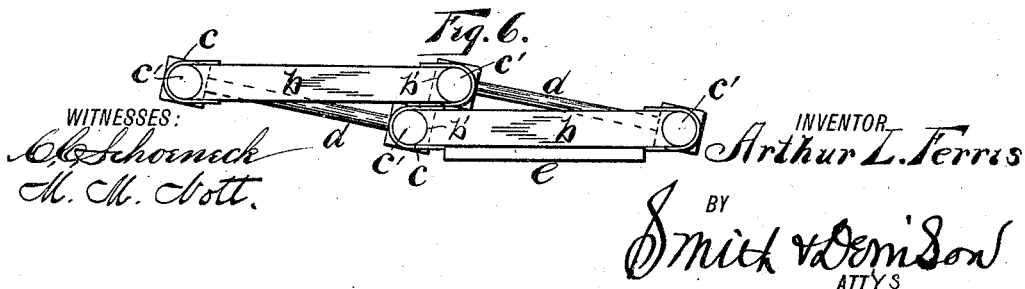
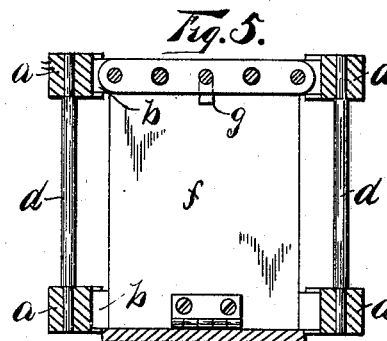
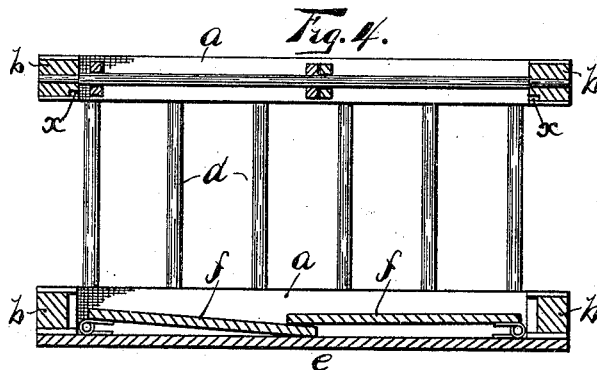
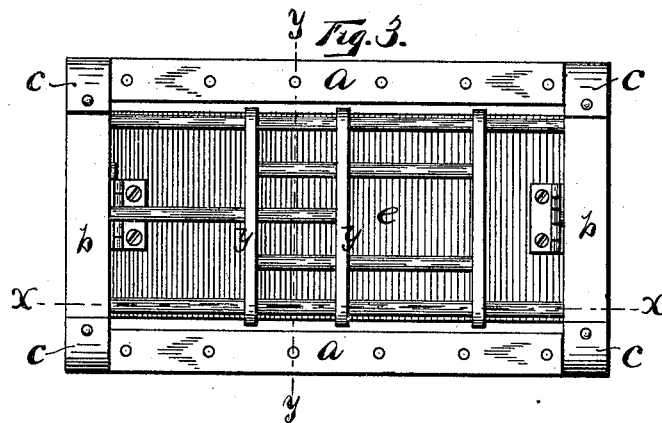
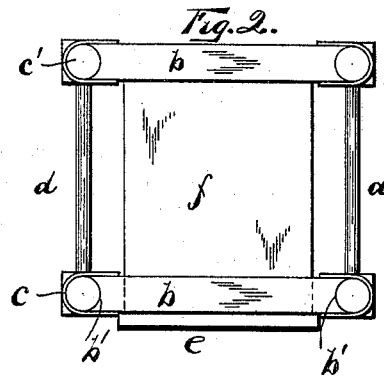
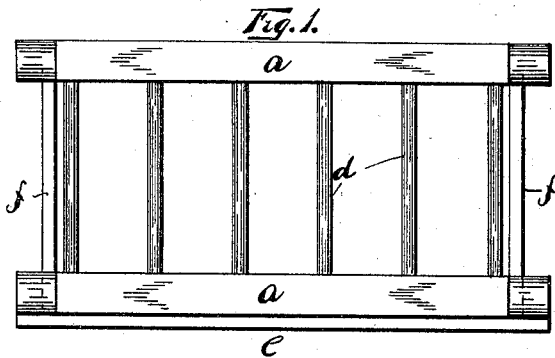
No. 647,134.

Patented Apr. 10, 1900.

A. L. FERRIS.
FOLDING CRATE.

(Application filed June 14, 1899.)

(No Model.)



WITNESSES:

C. Schornack
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UNITED STATES PATENT OFFICE.

ARTHUR L. FERRIS, OF KIDDERS, NEW YORK.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 647,134, dated April 10, 1900.

Application filed June 14, 1899. Serial No. 720,488. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR L. FERRIS, of Kidders, in the county of Seneca, in the State of New York, have invented new and useful
5 Improvements in Folding Crates, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in
10 folding crates or racks adapted for shipping articles of merchandise of various kinds.

My object is to produce a crate or coop which is adapted to be folded so as to occupy a minimum amount of space when not in use
15 or, when desirable, to ship from one place to another and at the same time adapted to be extended and put into use at a moment's notice, cheap and durable in its construction, and of great utility; and to that end my invention
20 consists of the several new and novel features of construction which are hereinafter described, and specifically set forth in the claim hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of the crate complete extended and ready for use. Fig. 2 is an end view thereof. Fig. 3 is a top plan
30 view of Fig. 1. Fig. 4 is a section on line X X, Fig. 3. Fig. 5 is a section on line Y Y, Fig. 3. Fig. 6 is an end view of the crate folded or in its knocked-down position.

Similar letters of reference indicate corresponding parts.

a are the horizontal frame-bars, and *b* are end bars rotatably secured to the ends thereof by straps *c*, passing around the circular end *c'* of the bars *a*, and *d* are the spindles, which
40 connect the upper pair of bars with the lower pair, the upper pair forming the top and the lower pair the bottom. The end bars *b* are concaved or rounded out at their ends, as shown at *b'*, so as to form, with the strap *c*, a socket in which the end of the bars or tenons
45 *a* can rotate. The lower pair of bars forming the bottom are provided with a bottom piece *e*, or it may consist of spindles similar to the sides of the crate, and to this bottom

are hinged end pieces *f*, which may be folded
50 down and rest upon the bottom *e*, as shown in Fig. 4, and then by pressing laterally upon the upper frame-bars the crate will collapse and assume the position shown in Fig. 4. The crate is made rigid by raising up the end
55 pieces, where they assume the position as shown in Fig. 5 and are held by a button *g*.

In order that the end pieces may rigidly brace the upper portion of the coop in position when it is ready for use, the inner lower
60 edges of the upper pair of bars *b* are recessed, as shown at *x*, so as to receive the top edges of the end pieces *f*, and to make sure that these end pieces do not drop down into the position shown in Fig. 4 and thus allow the
65 coop to collapse, as shown in Fig. 6, the end of one of the sliding frames *y*, which form the top, is made to bear against the end piece at that end of the coop, while the other is locked in position by means of the catch *g*. Should
70 the end piece which is held by the sliding frame *y* be loosened by the movement of the frame, the other end is held by the catch *g*, and should the catch not be turned down the end of the sliding frame bearing against the
75 piece *f* at the other end will prevent the coop from collapsing.

I do not limit myself to any particular means of inclosing the various sides, ends, or bottom of the crate, as it would be evident
80 that it could be made of lattice-work or solid work, only that it would be necessary to provide a strip across the bottom of each end to which the end pieces are hinged. It will also be evident that it may be used for a fruit-
85 crate by turning up one of the end pieces and allowing the other one to remain dormant against the bottom.

Having described my invention, what I claim, and desire to secure by Letters Patent, 90 is—

In a folding crate, the solid bottom *e*, the lower pair of bars *b* rigidly secured thereto, the bars *a* having the round ends *c'*, and the straps *c* by means of which the bars *a*, *b*, are
95 loosely connected, combined with the cross-bars *b* at the upper portion of the frame, and which are provided with the grooves *x* in their

inner lower edges, the end pieces *f* connected to the bottom piece and having their upper edges adapted to catch in the grooves *x*, suitable rods or spindles by means of which the bars *a* are connected, the button *g* for securing one of the end pieces in position, and the sliding frames *y* which form the top of the coop, and one of which is adapted to lock one

of the end pieces in position, substantially as shown and described. 10

In witness whereof I have hereunto set my hand this 3d day of June, 1899.

ARTHUR L. FERRIS.

Witnesses:

D. C. WHEELER,

M. R. COLEMAN.