

(No Model.)

S. I. BUTTERS.
FOLDING CRATE.

No. 502,481.

Patented Aug. 1, 1893.

Fig. 1.

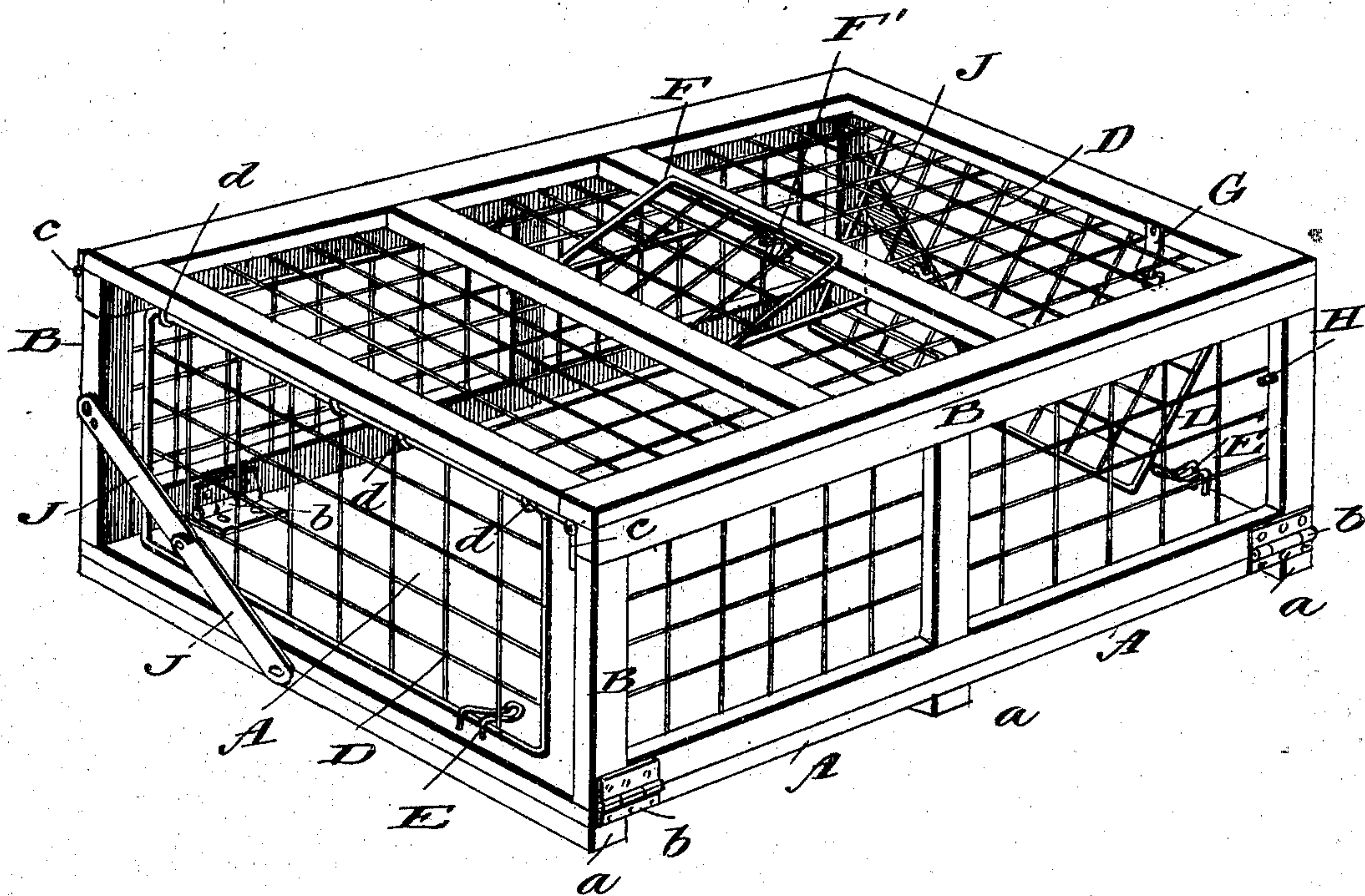


Fig. 2.

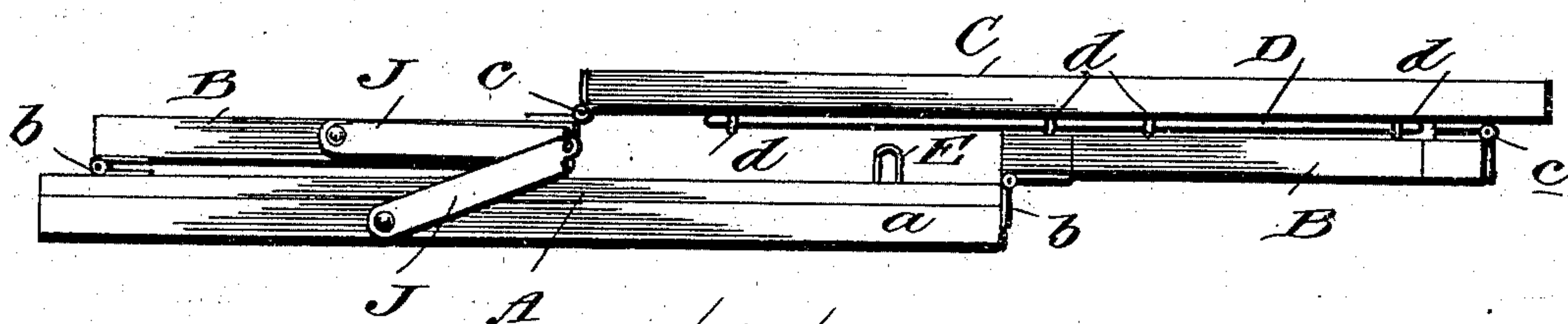
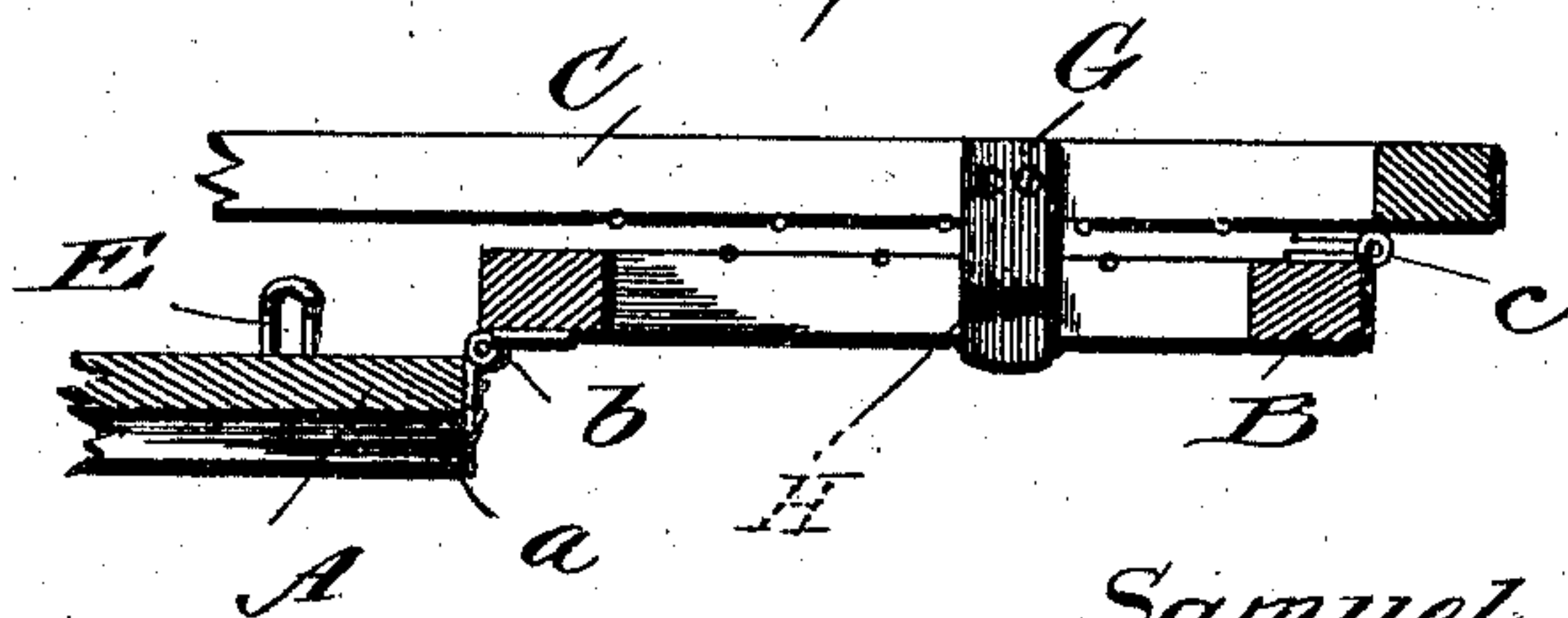


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL I. BUTTERS, OF CLARKSBURG, WEST VIRGINIA.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 502,481, dated August 1, 1893.

Application filed October 10, 1892. Serial No. 448,406. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL I. BUTTERS, a citizen of the United States, residing at Clarksburg, in the county of Harrison, State of West Virginia, have invented certain new and useful Improvements in Folding Crates, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in folding crates, and it has for its objects among others to provide an improved crate or coop which shall be light yet strong, foldable into a small space, automatically locked in its folded position, strongly braced, and in which the netting will be protected against injury when the crate is folded. The ends are designed to be folded against the top and there held by suitable catches or fastenings.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

25 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

30 Figure 1 is a perspective view of my improved crate in its distended condition. Fig. 2 is a view of the same in its folded condition. Fig. 3 is a sectional detail, showing the catch for locking the parts in their folded position.

35 Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the bottom of the crate which may be of any desired construction, and is shown as provided upon its outer face with cross strips *a* as seen in Fig. 1 which serve to elevate the bottom slightly above the bottom of the car or ground, but these strips may be dispensed with. To this bottom are hinged by hinges *b* the sides B of the crate, which are of any suitable construction and preferably a skeleton frame covered with a wire gauze or other reticulated medium as shown in Fig. 1. The hinges of the two sides are oppositely arranged as seen in Figs. 1 and 2 so that the two sides will fold

toward each other as illustrated in Fig. 2, that is in the same direction so that the crate will lie flat when folded as shown in Fig. 2. To the upper edges of these sides is hinged by suitable hinges *c* the top C which consists of a suitable supporting frame covered with any desired material, as wire gauze. The hinges of the top are also arranged alternately as seen in Fig. 2 to permit of flat folding of the parts. The ends D are hinged or pivoted to the end bars of the top (or it may be to the bottom), in any suitable manner, as by having the top portion of the supporting frame, preferably made of wire, held in eyes or staples *d* on the under side of the said top end bar as seen in Fig. 1. The said frame fits sufficiently snug in the eyes or staples to hold the ends in their open position against the under side of the top by friction; they are held in their closed position by means of spring wire catches E which are engaged by the lower cross bars of the ends as seen in Fig. 1. The top is provided with a hinged door portion F which is held in its closed position by a spring wire catch or holder F' similar in construction and operation to the catches E.

When it is desired to fold the crate pressure is exerted upon diagonally opposite corners when it readily collapses into the position shown in Fig. 2. In order to hold the parts in their folded position and to lock the same automatically as they are folded I have provided a spring catch G upon the end bar of the top as seen best in Fig. 1, which, as the parts come together in being folded, is engaged by a pin H on the end bar of the adjacent side and projecting lengthwise of the crate as seen best in Fig. 1; Fig. 3 shows the parts folded and the said pin and catch engaged. When it is desired to distend the crate a slight pull will be sufficient to disengage the said catch and pin and permit the parts to be thrown open into the position in which they are shown in Fig. 1. In order to hold the crate open against accidental collapsing I provide the jointed braces J which are secured at opposite ends of the crate as shown, and pivotally connecting the bottom and side upon one side of the crate. They are of such a nature as to be self-locking when

straightened and yet readily foldable by simply breaking the joint in a well known way.

A crate thus constructed can be manufactured at a small cost, can be readily collapsed
5 or set up, and when folded the covering of the sides is protected from injury. The shape and size of the crate can of course be varied at pleasure.

What I claim as new is—

10 1. The combination with the bottom and the sides hinged thereto, and a top hinged to the sides, of a spring catch on the end bar of the top, and a pin projecting from the end bar of the adjacent side in the direction of
15 the length of the crate and adapted to engage said catch as the crate is folded into its closed position, substantially as specified.

2. The herein described folding crate comprising a bottom, sides hinged thereto with

the hinges at the top and bottom of said 20 sides upon opposite sides thereof, a top having a hinged door with spring-wire catch, ends hinged to the top spring wire catches on the bottom for said ends, diagonal braces pivoted to the bottom and sides and jointed 25 at their centers, a spring catch upon the top bar at one end and a pin projecting from the end of the adjacent side in the direction of the length of the crate to automatically engage said catch as the parts are folded and 30 hold the same in their closed position, substantially as specified.

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

SAMUEL I. BUTTERS.

Witnesses:

E. G. MORGAN,
B. J. LONG.