No. 883,251. PATENTED MAR. 31, 1908.

C. E. SOMMERS.

FOLDING CRATE OR BOX.

APPLICATION FILED APR. 10, 1907.

Fig. 1.

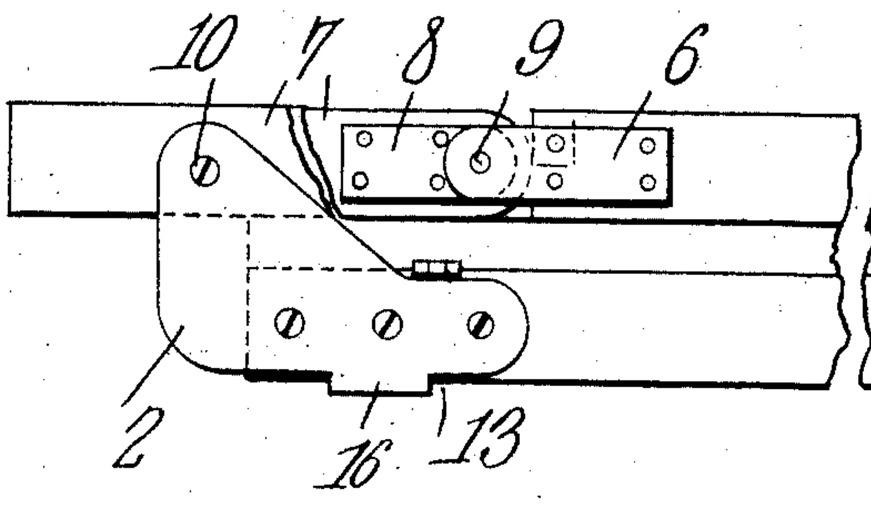


Fig. 4.

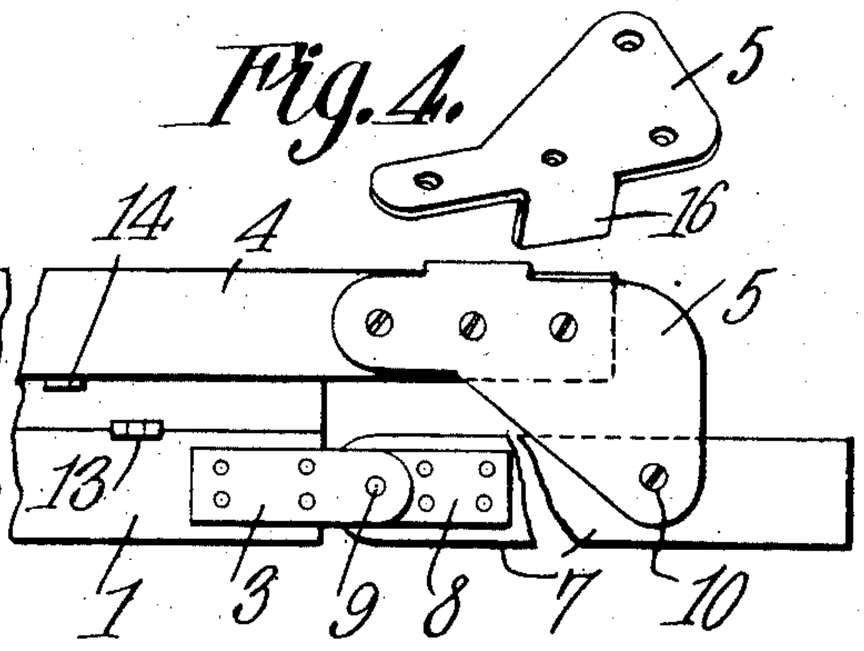


Fig. 2.

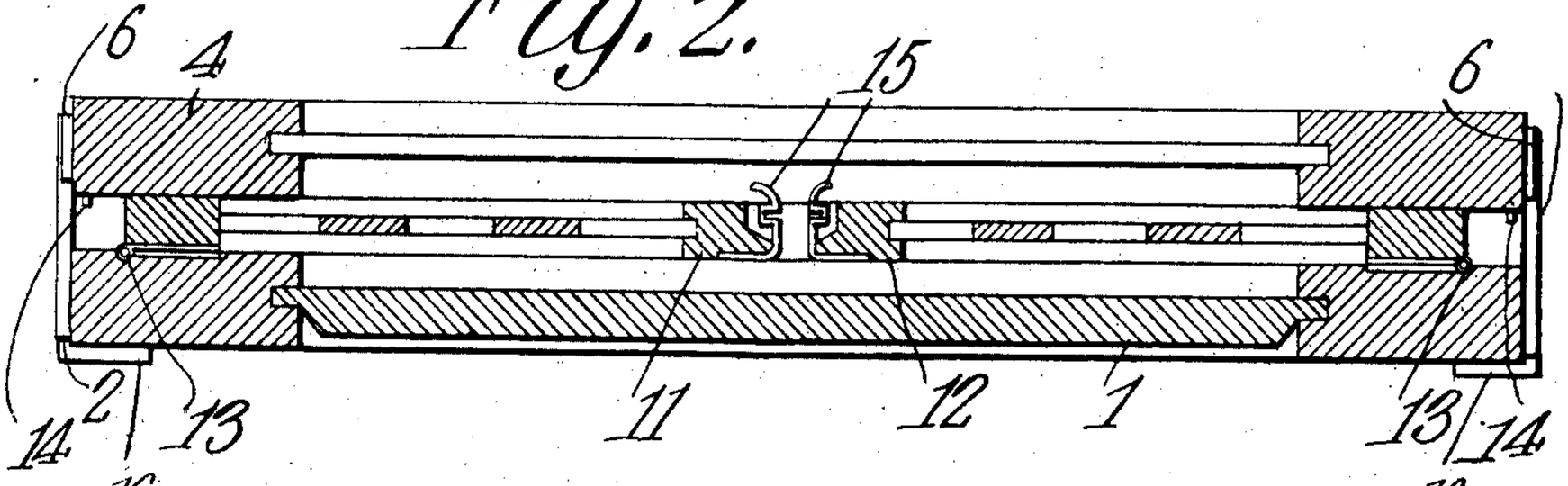
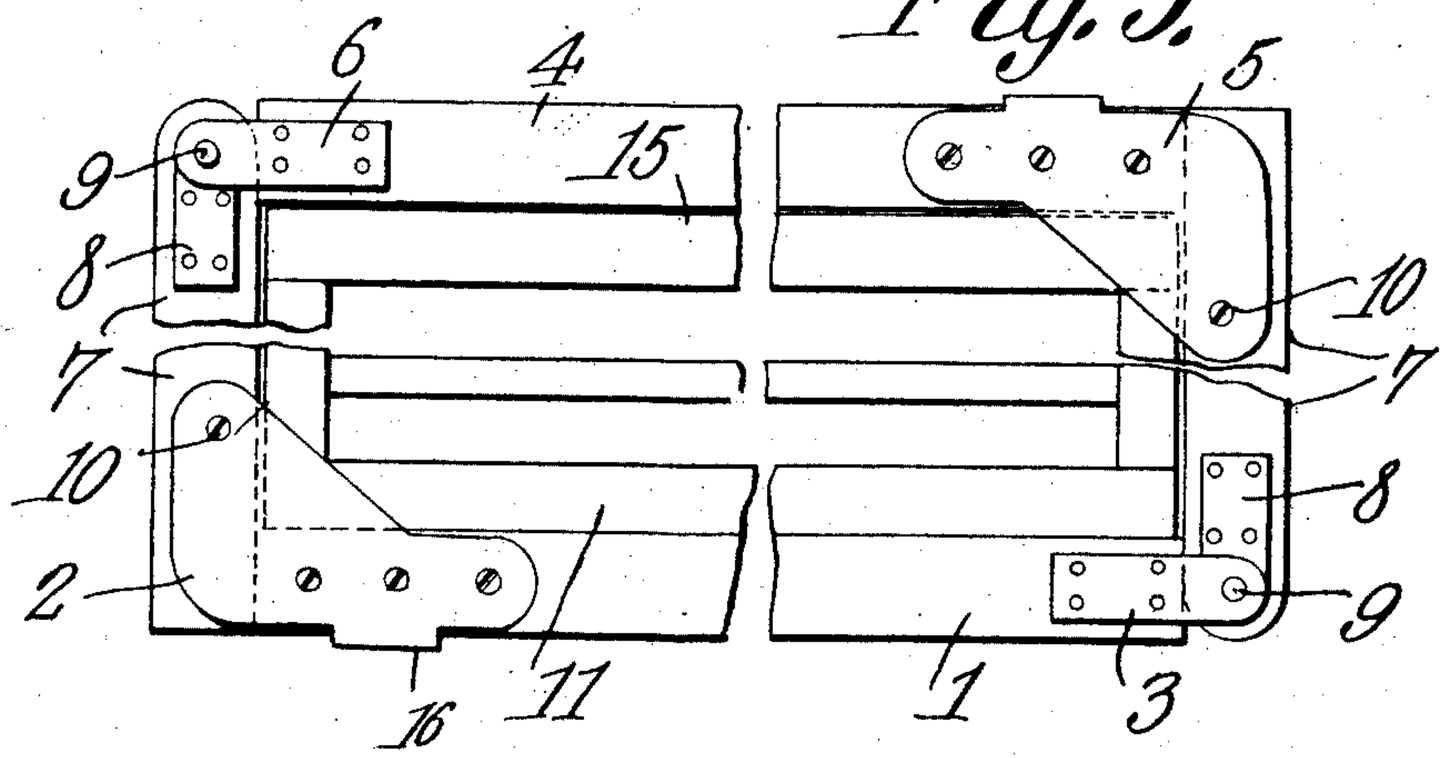


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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FOLDING CRATE OR BOX.

No. 883,251. Specification of Letters Patent. Patented March 31, 1908.

Application filed April 10, 1907. Serial No. 367,320.

To all whom it may concern:

Be it known that I, CHARLES EDWARD SOMMERS, a citizen of the United States, residing at Hastings, in the county of Dakota and State of Minnesota, have invented a new and useful Folding Crate or Box, of which the following is a specification.

This invention relates to folding crates or boxes and is more particularly designed for use as a poultry crate.

The object of the invention is to provide a device of this character all the parts of which are secured together so that there is no danger of portions of the crate becoming displaced and lost while in transit.

A still further object is to provide a crate which can be quickly collapsed into a compact and practically solid bundle of comparatively small size and which can be as quickly set up.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a side elevation showing the crate collapsed, portions of the crate being removed; Fig. 2 is an enlarged transverse section through the collapsed crate; Fig. 3 is a side elevation showing the crate set up for use, portions of the crate being broken away; and Fig. 4 is a detail view of one of the supporting plates.

Referring to the figures by characters of reference, 1 is the bottom panel of the crate which may be of any preferred construction and secured to the sides of this panel at one end are substantially triangular supporting plates 2 which project beyond the ends of the panel and above the upper surface thereof. Hinge straps 3 are secured upon the side edges of the bottom panel at the other end thereof and project beyond said end. The top panel 4 is provided at one end with substantially triangular supporting plates 5 similar to the plates 2 and which extend beyond and below one end of the panel. Hinge straps 6 are fastened to the sides of the panel 4 and extend beyond the other end thereof. These hinge straps are similar to the straps 3. Extending between the plates 2 and 5 and straps 3 and 6 are end panels 7 each of which has hinge plates 8 secured to its side edges near one end and provided with outstanding lugs 9 designed to fit within apertures in the straps 3 and 6. Said ends of the end panels are rounded and disposed, when the crate is set up, to lap opposite ends of the top and bottom panels respectively.

The projecting portions of the plates 2 and 5 are connected to the end panels by means of pivot devices 10 such as screws which enter the sides of the end panels. Those portions of the end panels which project between the plates 2 and 5 are designed to abut against the adjoining ends of the top and bottom panels so as to limit the swinging movement of the end panels in one direction. Front and rear panels 11 and 12 are connected to the upper face of the bottom panel near the front and rear edges thereof by means of hinges 13 and these panels are designed to fold inwardly onto the bottom panel. The distance between the inner faces of the panels 1 and 4 and the adjoining pivot screws 10 is such that when the front and rear panels are folded onto the bottom the top panel and one of the end panels is free to swing downward onto the front and rear panels and will form a compact bundle with all of the lapping portions in direct contact as shown in Fig. 1. Projections 14 extend from the front and rear portions of the top panel and are designed to be engaged by spring catches 15 carried by the front and rear panels.

When it is desired to use the crate the top panel is pulled upward from its position upon the folded front and rear panels and the end panels 7 will swing into upright position, their movement being limited by one end of each panel coming into contact with the adjoining end of the top or bottom panel. After the parts have been spread apart in this manner the front and rear panels are swung upward upon their hinges so as to assume upright positions between the top and bottom panels, whereupon the catches 15 will engage the projections 14 and the crate will therefore be securely locked with its parts extended. When it is desired to collapse the crate it is merely necessary to pull downward on the catches 15 so as to release them from the projections 14 whereupon the front and rear panels can be swung downward onto the bottom panel and the end panels 7 swung laterally so that one of them will assume a position in alinement with the bottom panel while the other will assume a position in

alinement with the top panel, said top panel resting snugly upon the folded front and rear panels.

It will be seen that when the crate is collapsed it can support a considerable weight without danger of the parts twisting as would be the case if all the parts were not properly supported. The collapsed crates can therefore be assembled in large stacks without danger of becoming twisted or broken. It will be seen that the crate is very simple and durable in construction and as the parts are at all times connected it is not possible for any of them to become lost when the crate is not in use.

Although the front and rear panels have been shown hinged to the bottom panel it is to be understood that if preferred said panels can be hinged to the top panel instead.

As shown in Fig. 4 and also in the other figures the plates 2 and 5 can be provided with laterally extending ears 16 designed to be secured to the outer faces of the top and bottom panels.

What is claimed is:

A collapsible crate comprising flat top and bottom panels, end panels hingedly connected to the top and bottom panels and disposed to assume positions in alinement and parallel therewith when the crate is folded, each end panel being disposed to lap one end of one of the top and bottom panels and to be lapped by the other one of said panels when the crate is set up, front and rear panels hingedly connected to the bottom panel and disposed to fold thereon and to constitute a support for the top panel when the crate is folded, said front and rear panels being movable into position perpendicular to the top and bottom panels and being limited in their movement in one direction by contact of one edge portion of each front and rear panel with the bottom panel, and separate means carried by the front and rear panels and the top panel for automatically locking said panels together when the crate is set up.

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

CHARLES EDWARD SOMMERS.

Witnesses:
JOHN RARTZ,
OWEN H. GEORGE.