

No. 659,709.

Patented Oct. 16, 1900.

E. W. STEVENS.
FOLDING CRATE.

(Application filed Mar. 20, 1900.)

(No Model.)

Fig. 1.

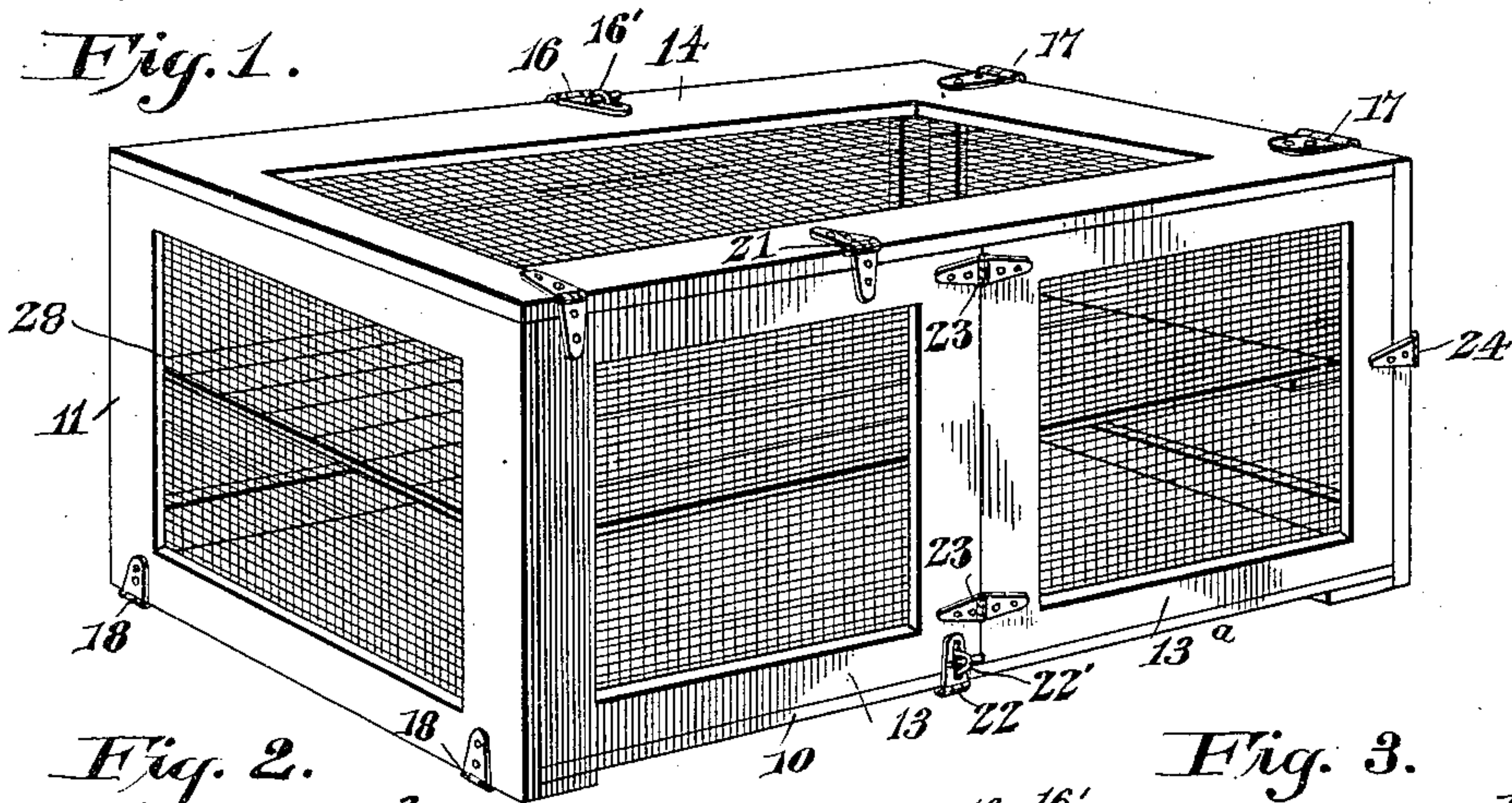


Fig. 2.

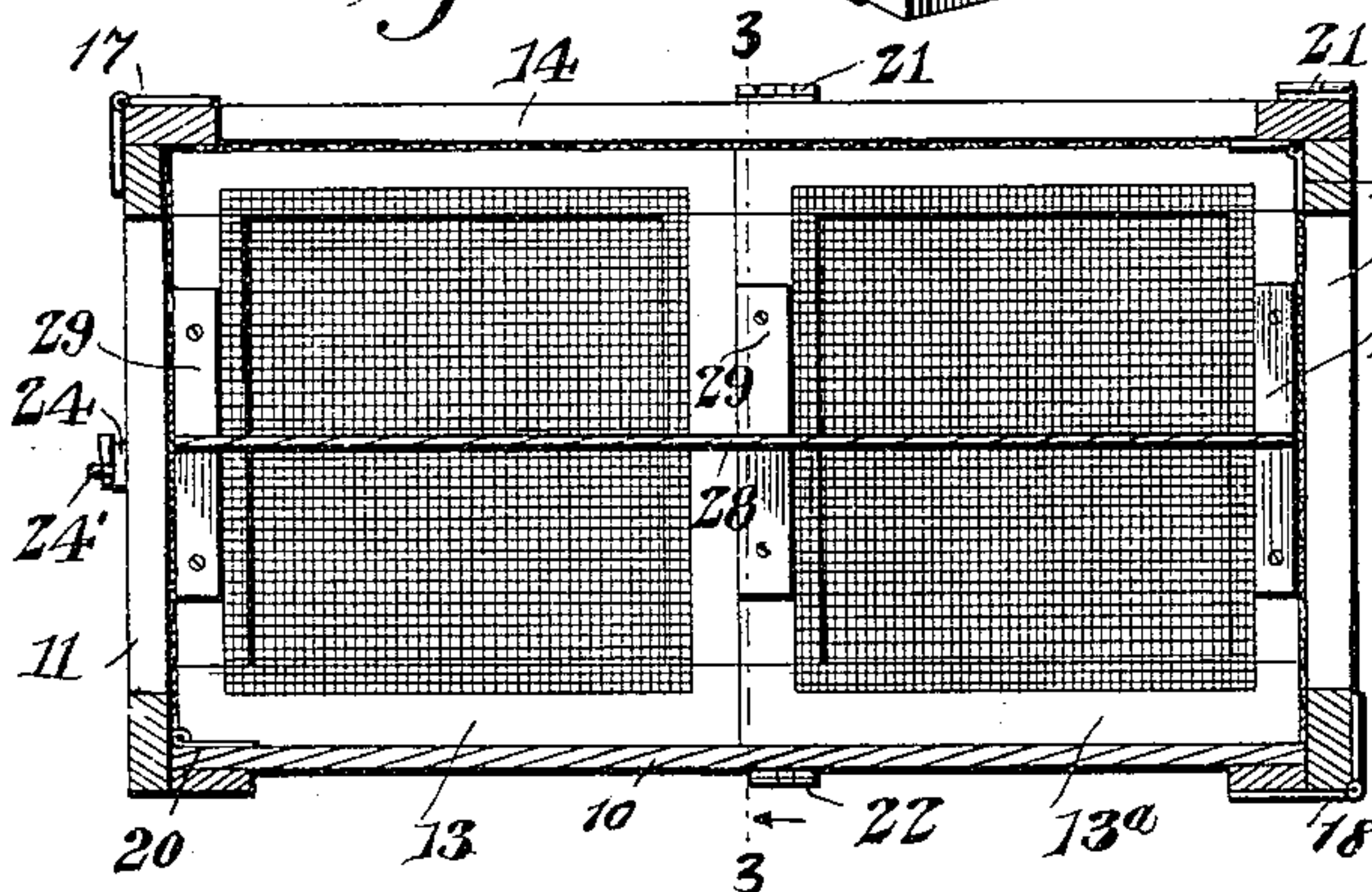


Fig. 3.

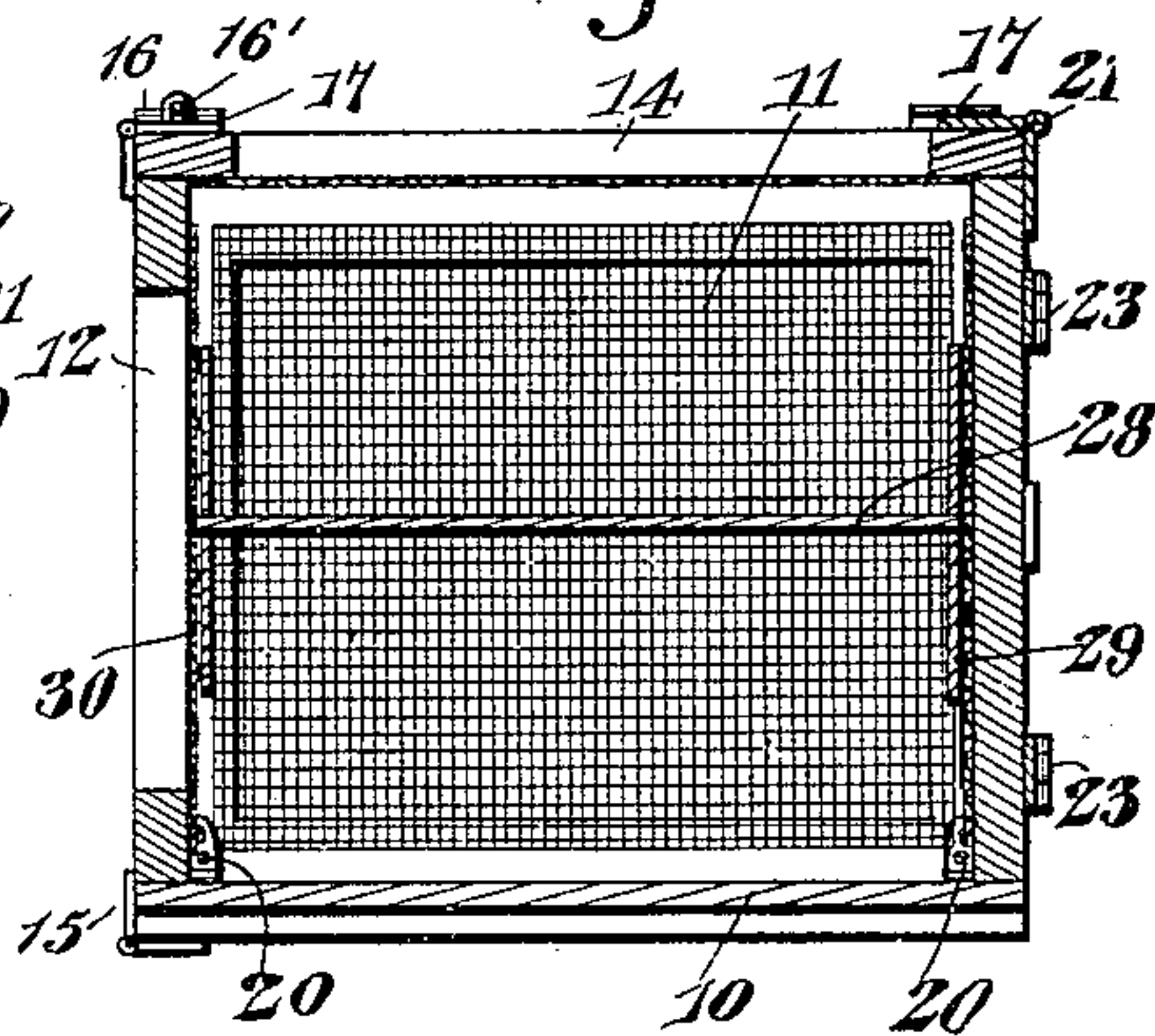


Fig. 4.

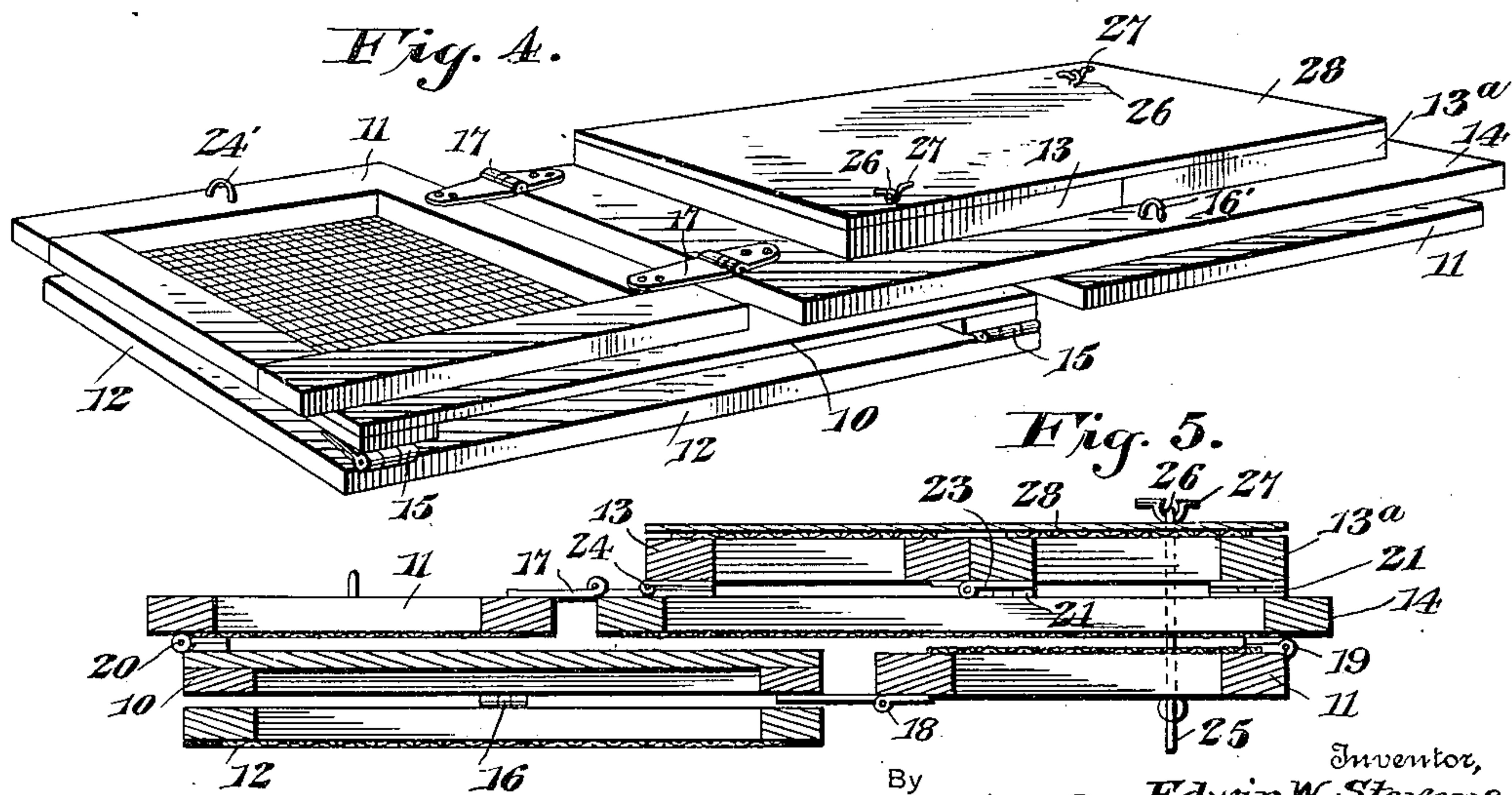
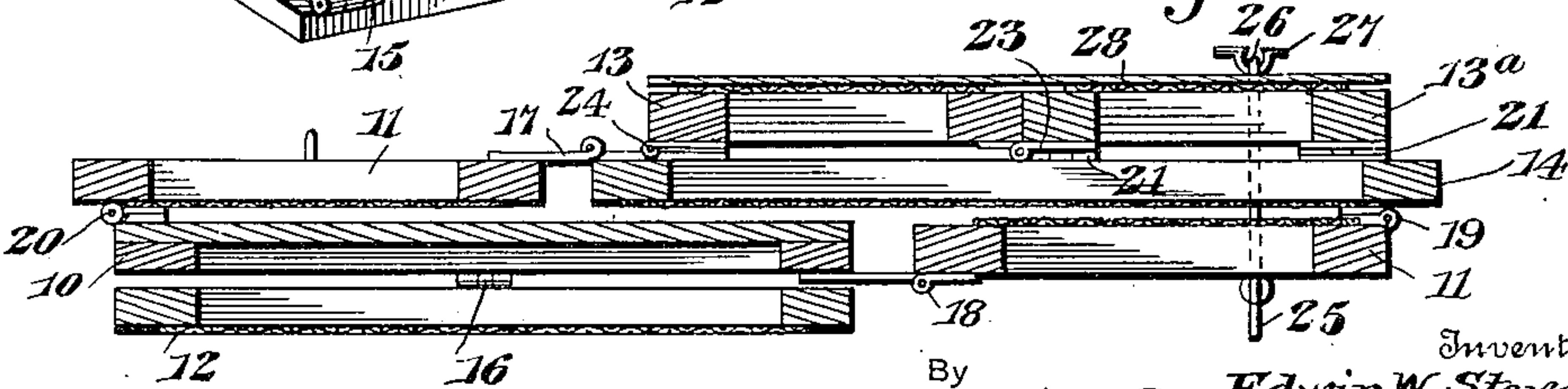


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE

EDWIN WALLACE STEVENS, OF LAKE CAREY, PENNSYLVANIA.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 659,709, dated October 16, 1900.

Application filed March 20, 1900. Serial No. 9,395. (No model.)

To all whom it may concern:

Be it known that I, EDWIN WALLACE STEVENS, a citizen of the United States, residing at Lake Carey, in the county of Wyoming and State of Pennsylvania, have invented a new and useful Folding Crate, of which the following is a specification.

My invention relates to improvements in shipping-crates of the class known to the art as "foldable" or "knockdown" structures; and one object in view is the provision of a simple and cheap construction which may be compactly folded for shipment in returning the same to the owner and which will present a strong and rigid structure when set up for use.

A further object of the invention is to provide means for dividing the interior of the crate into one or more compartments, such dividing means being secured detachably to the crate in its folded and unfolded condition.

Further objects and advantages of the invention will appear in the course of the subjoined description and the novelty in the construction and arrangement of parts will be pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved crate in its unfolded condition and ready for use. Fig. 2 is a vertical longitudinal section of the improved crate. Fig. 3 is a vertical cross-sectional view through the crate on the plane indicated by the dotted line 3 3 on Fig. 2. Fig. 4 is a perspective view of the crate in its folded or knockdown condition. Fig. 5 is a longitudinal sectional view through the crate in its folded condition and with the fastenings applied thereto.

The same numerals of reference are used to indicate like and corresponding parts in each of the figures of the drawings.

The foldable crate of my invention consists of the bottom 10, the ends 11, a back 12, a sectional front 13 13^a, and a top 14. These parts may be made of wood or metal; but for the purposes of ventilation in a crate adapted for shipment of poultry I prefer to make each element of the crate in the form of a skeleton frame, which is covered with a suitable foraminous material, such as wire-netting.

In the embodiment of the invention shown

by the drawings I have represented a poultry-crate in which the parts are made of wooden skeleton frames covered by wire-netting; but I would have it understood that I do not limit myself to making the skeleton frames of wood, because they may be made of metal and any equivalent for the wire-netting, such as perforated sheet metal, may be employed as the foraminous material.

The back of the crate is hinged at one edge, as at 15, to the bottom 10 of the structure, and this back is of such size as to fit snugly within the edges of the bottom, the top, and the ends of the crate when the latter is set up in the condition shown by Figs. 1, 2, and 3. With the free or unconfined end of this hinged back is associated a suitable fastening device, which I have shown in the form of a hasp 16, which is attached to the back and is adapted to engage with a staple 16' on the top of the crate, said parts adapted to receive a transverse fastener, such as a pin or padlock. By arranging the back to fold within the rear edges of the bottom, the top, and the ends of the crate the parts are adapted to lie flush with each other, and the back serves in a measure to reinforce the other parts of the structure, thus securing strength and rigidity in the crate.

The top 14 and one end 11 are united together at one corner of the crate by the hinges 17, while the bottom 10 and the other end 11 are joined at the diagonally-opposite corner of the crate by the hinges 18. These hinges at diagonally-opposite corners of the crate are located exteriorly thereto; but at the remaining points I employ the hinges 19 and 20 to join the top and the bottom to the other edges of the ends 11, such hinges 19 20 being disposed inside of the crate, as clearly shown by the drawings. This arrangement of the hinges provides for the folding of the top and bottom in parallel relation to each other and causes the ends to fold against the top and bottom, respectively, as clearly shown by Figs. 4 and 5, whereby all the parts of the crate fold within a narrow compass.

The front of the improved crate consists of the sections 13 13^a, the former of which is hinged at one edge, as at 21, to the top 14. The free edge of this hinged front section 13 is held securely in place by a hasp 22, fas-

tened to the bottom and adapted to engage with a staple 22' on the section 13 of the front of the crate. The other section 13^a of the front is united to the section 13 by the hinges 23, the pintles of which are disposed at right angles to the pintles of the hinges 21, that connect with the front section 13 directly to the top 14. The front section 13^a is provided at its free edge with a hasp 24, arranged for engagement with a staple 24', secured to one of the ends 11. It will be observed that I have provided a front comprising two sections or members which are hinged together for one member 13^a to fold upon the other member 13, and this last-named member is hinged directly to one of the walls of the crate, so that the front may be thrown in a backward and upward direction entirely out of the way, if desired. The hinged section 13 of the front is adapted to be fastened to the crate by the hasp 22 independently of the other section 13^a, and in like manner the last-named section 13^a may be fastened by the hasp 24 independently of the first-named section. In the use of the crate the section 13 is fastened in place before the poultry is introduced into the crate, thus permitting the section 13^a to be opened and closed and reducing the space through which the poultry can escape.

By reference to Figs. 1, 2, and 3 of the drawings it will be noted that the two-part front of my crate fits within the edges of the top, the bottom, and the ends, and thus the front is disposed in similar way to the back for the purpose of imparting strength and rigidity to the crate, thus overcoming any tendency of the crate to collapse accidentally. In folding the crate the back is opened in one direction, so as to fold against the underside of the bottom, the front is folded or turned in an opposite direction to lie against the upper side of the top 14, and then the parts of the crate are turned on the several hinges for the top and one end to lie against the bottom, while the other end is parallel to the bottom, all as clearly shown by Figs. 4 and 5. In this condition of parts the fastener-keys 25 are passed through suitable openings which are provided in the several parts, which openings are brought into registration or coincidence by the folding of said parts. Each fastener-key is provided at its ends with the eyes or loops 26, to which are loosely connected the securing-pins 27, the latter being foldable alongside the keys, so as to be thrust therewith through the openings. The securing-pins are adapted to turn to assume positions at right angles to the keys, and the latter are thus held in place against accidental withdrawal from engagement with the parts of the crate.

I have also provided the crate with one or more decks 28, arranged to divide the interior thereof into two or more compartments, ac-

ording to the number of partitions employed. In Figs. 1, 2, and 3 the crate is shown as having a single deck 28, which is supported in place by any suitable means to lie parallel to the top and the bottom. As one means for holding the deck in place, the crate is provided with cleats 29 30, the former being secured to the back and the latter fastened to the section 13 of the front. The deck may rest on the cleats or be fitted in notches provided in the cleats, so as to be clamped in place by the back and one section of the front, or the deck may be fastened positively to the crate by any form of detachable fasteners. In folding the crate the deck is removed, the hinged parts folded together, deck or decks laid on top of the crate, and the fastener-pins then passed through the deck and other parts of the crate.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim is—

1. A foldable crate having its walls pivotally connected, one of said walls being formed of two sections, one section being hinged to one side, means for fastening the free end to the opposite side, the other section hinged at right angles to the hinges of the first-named section and opening outwardly forming a door, and means for fastening the free end of the latter section to the meeting edge of the adjacent wall, substantially as described.

2. A foldable crate comprising the top, the bottom, the ends hinged to said top and bottom, a back hinged to the bottom and arranged to fit within the edges of the top, bottom, and ends, and a front made of two sections and arranged to fit within the edges of the top, bottom and ends, one of said sections being hinged directly to the top, and the other section being hinged to the first-named section at right angles to the hinges that unite said first section to the top, said latter section forming an outwardly-swinging door, and separate devices for individually fastening the respective sections to the bottom and ends of the crate, substantially as described.

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

EDWIN WALLACE STEVENS.

Witnesses:

H. S. HARDING,
HENRY HARDING.