

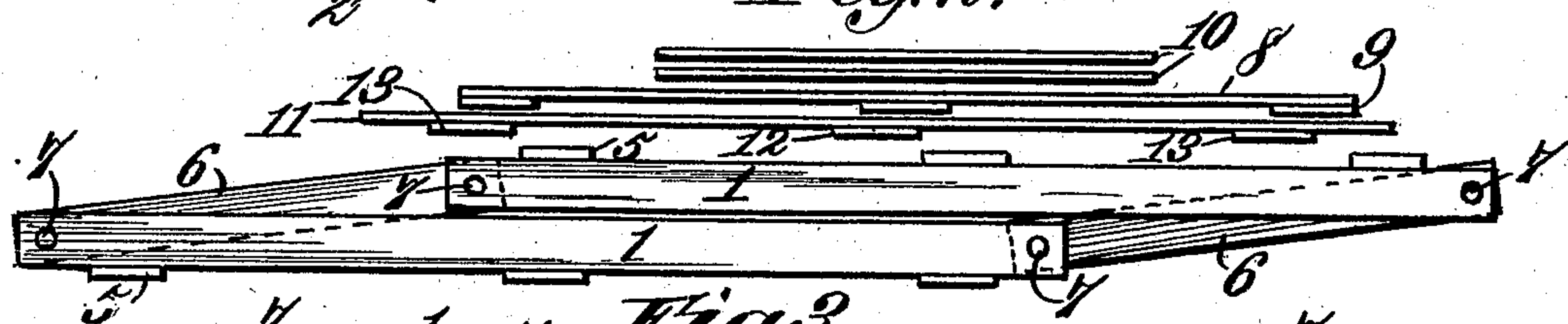
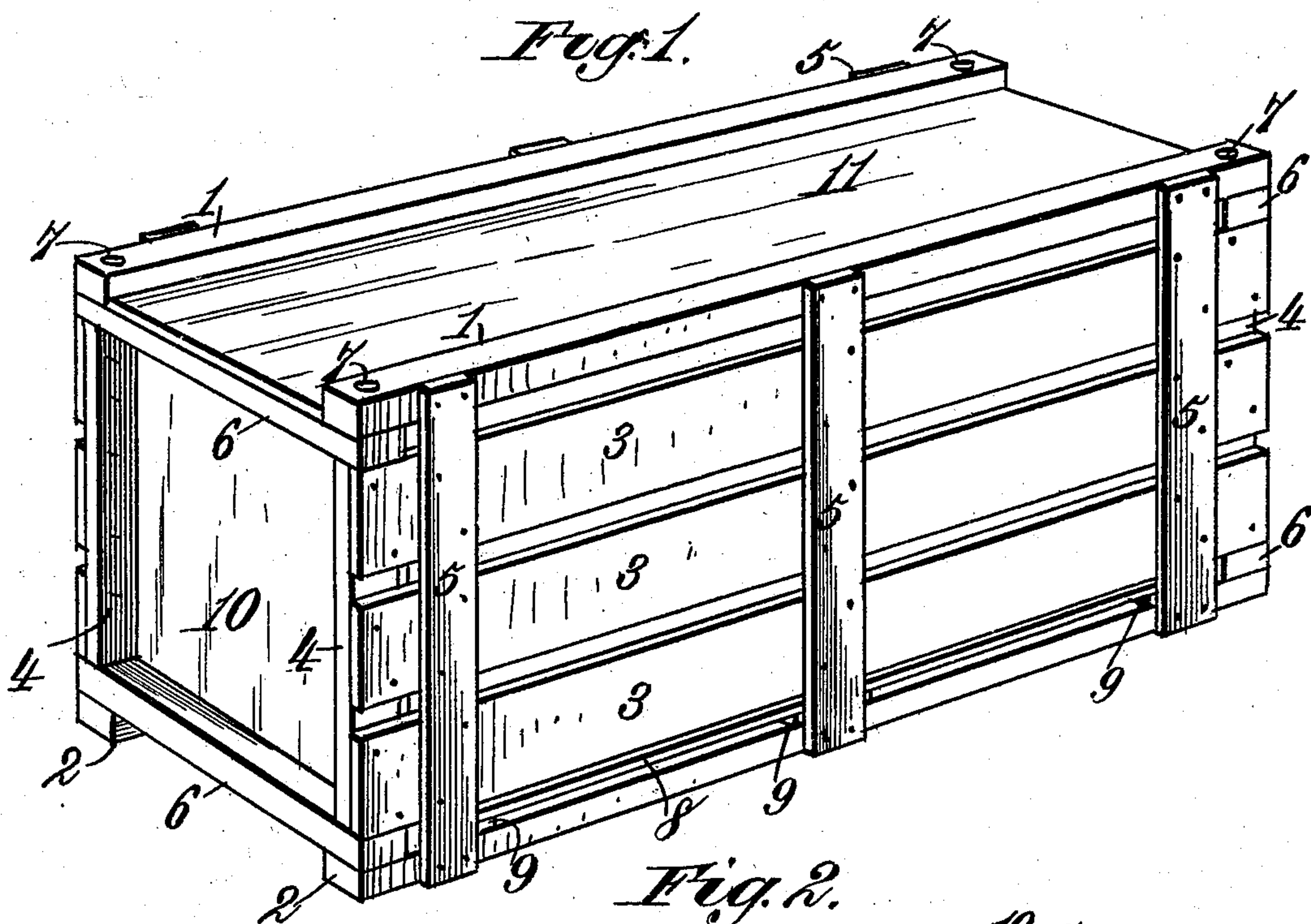
No. 814,882.

PATENTED MAR. 13, 1906.

E. SPERLING.
CRATE OR COOP.

APPLICATION FILED JULY 28, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 4.

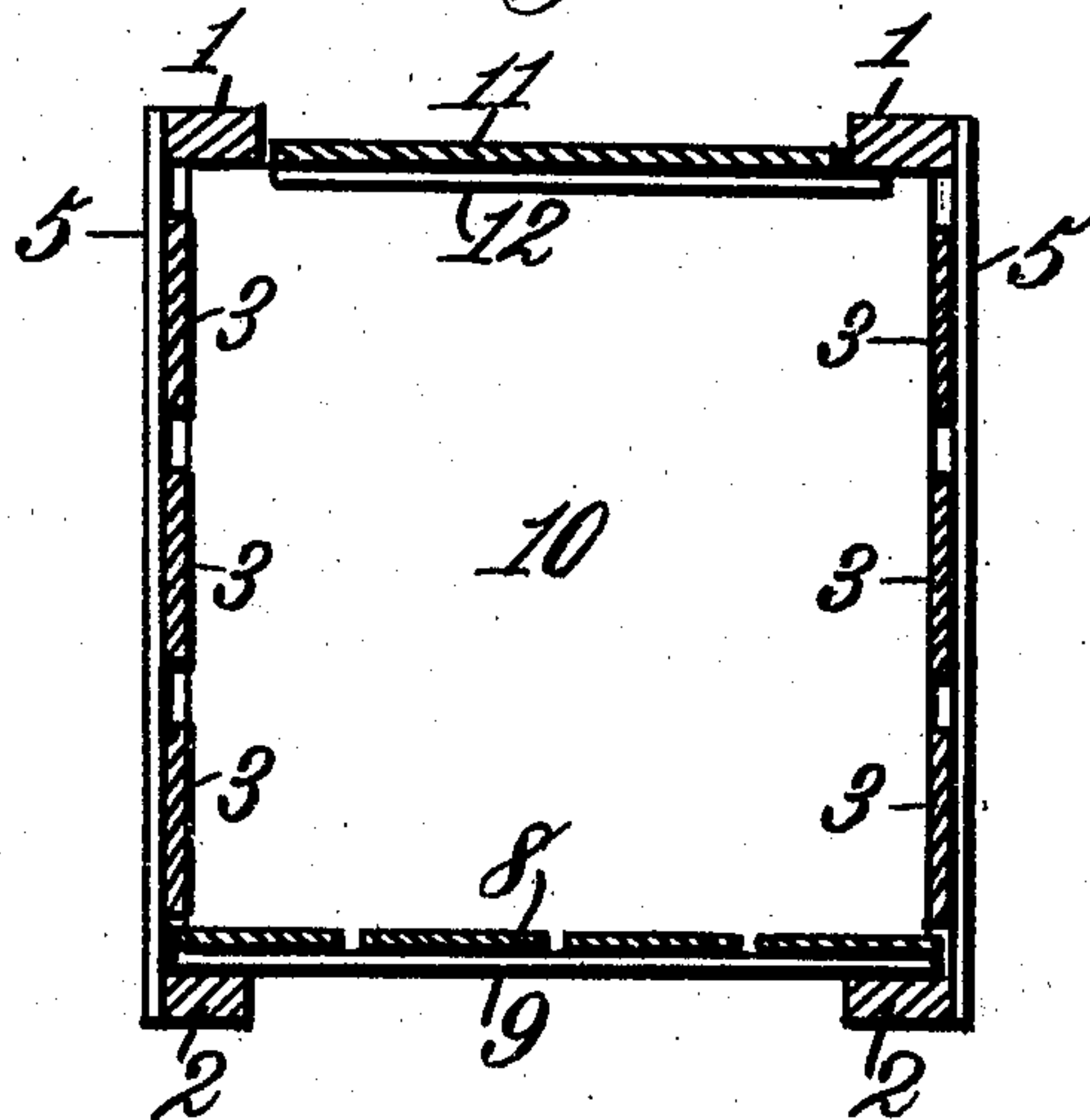
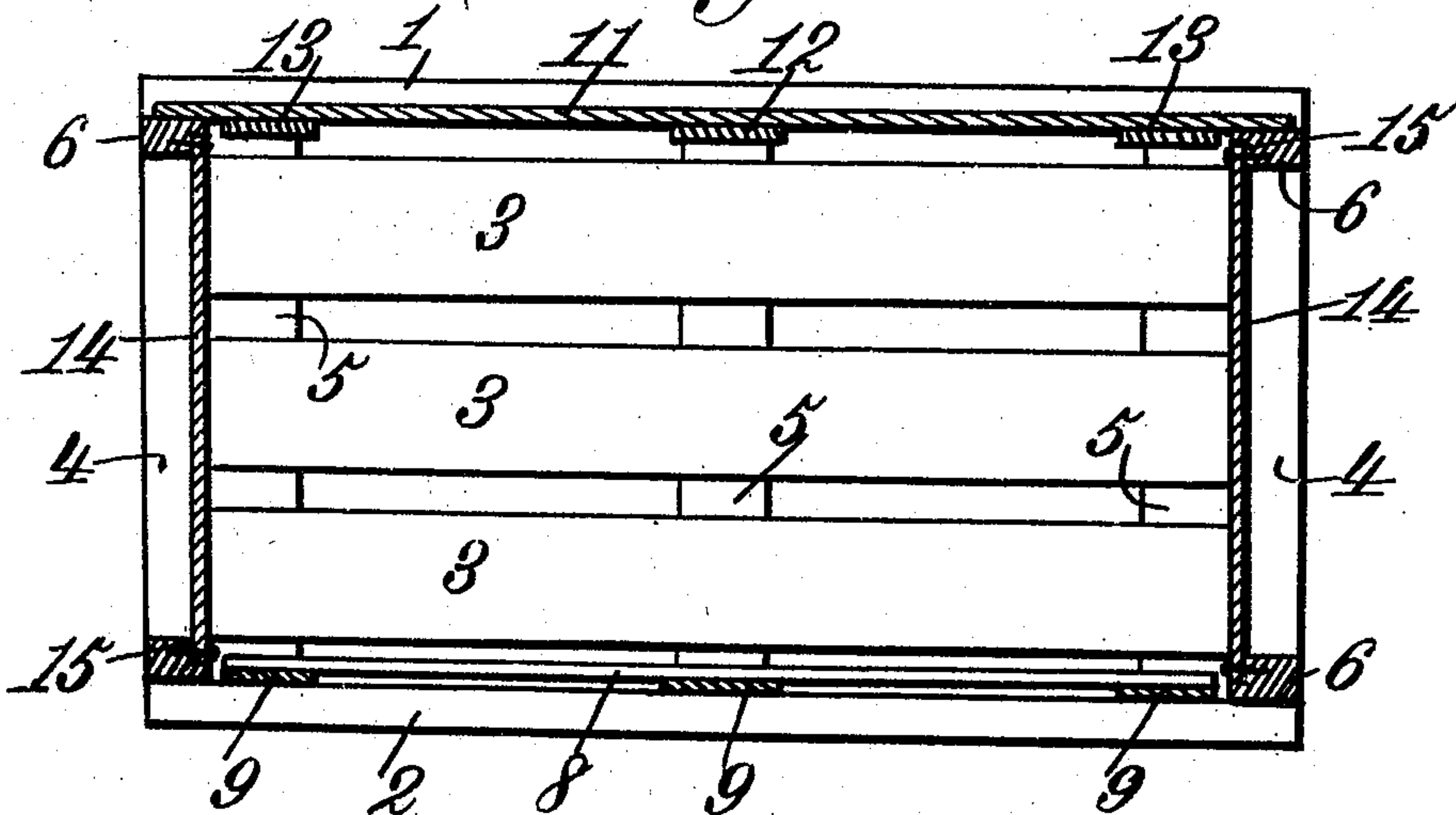


Fig. 5.



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UNITED STATES PATENT OFFICE.

ELLSWORTH SPERLING, OF LONGVIEW, TEXAS.

CRATE OR COOP.

No. 814,882.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed July 28, 1905. Serial No. 271,693.

To all whom it may concern:

Be it known that I, ELLSWORTH SPERLING, a citizen of the United States, residing at Longview, in the county of Gregg and State of Texas, have invented new and useful Improvements in Crates or Coops, of which the following is a specification.

This invention relates to a folding crate or coop for shipping or storing vegetables, fruits, poultry, and the like; and the primary object of the same is to produce a crate which will combine simplicity and cheapness of construction with efficiency and durability in use and capable of being reduced to minimum dimensions when folded or collapsed and quickly set up when adapted for use.

A further object of the invention is to produce a crate or coop wherein the use of expensive hardware and material is dispensed with and the operation of assembling the several parts facilitated by the employment of fastening means of the most simple character without in the least detracting from the necessary strength to resist wear and breakage under ordinary usage.

The crate or coop includes sides and ends which are movably connected at the corners, a removable bottom, and a readily-detachable top or cover.

The improved crate or coop also contemplates movably-connected side and end frames, a removable bottom and ends, and a detachable cover or top which operates to hold the ends in place.

In one form of the improved crate or coop both ends are stationary, and either the removable or the stationary ends may be used to form air-tight or ventilating ends, as may be desired.

In the drawings, Figure 1 is a perspective view of a crate embodying the features of the invention and shown arranged for use. Fig. 2 is an edge elevation of the body of the crate shown fully collapsed or folded. Fig. 3 is a longitudinal vertical section through the crate as shown by Fig. 1. Fig. 4 is a transverse vertical section through the crate illustrated by Fig. 1. Fig. 5 is a central longitudinal vertical section of the crate arranged for use and embodying fixed or stationary ends.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numerals 1 and 2 designate upper and lower side rails, to which are secured slatted

panels, consisting in each instance of a series of longitudinally-disposed slats 3, nailed at their opposite extremities to strips 4, which provide corner-posts in a manner which will be more fully hereinafter explained. The slats 3 have their ends flush with the outer edges of the strips 4 and are applied to the outer sides of the latter. Extending vertically over the outer sides of the slats 3 are securing-strips 5, nailed to each slat and also similarly secured at their upper and lower terminals to the rails 1 and 2, the upper and lower ends of the securing-strips being also flush with the upper and lower sides of the rails 1 and 2, respectively. The distance between the opposing sides of the rails 1 and 2 is greater than the length of the strips 4, and interposed between the ends of the latter and the adjacent sides of the rails 1 and 2 are the opposite terminals of upper and lower hinge-strips 6, which are connected to the rails 1 and 2 and strips 4 by elongated fastenings 7, driven through reverse sides of the rails and the hinge-strips into opposite extremities of the strips 4 to provide pivot or hinge connecting means for the said strips 6. By only partially penetrating the strips or posts 4 the strength and durability of the latter parts are not impaired and less expense and labor are involved in assembling the main frame of the crate or coop. The side panels embodying the longitudinal slats 3 and securing-strips 5 may be first assembled in relation to the strips 4 and afterward applied to the rails 1 and 2, thus leaving the requisite spaces to receive the terminals of the hinge-strips 6. The rails 1 and 2 are projected interiorly of the body to serve as supporting means, and the strips or posts 4 and the hinge-strips 6 are also adapted to be used as supporting means particularly in one structure of the crate or coop.

The crate or coop also includes in its organization a removable slatted bottom 8, made up of a series of longitudinal slats connected by end and intermediate cross-slats 9, which are nailed to the longitudinal slats. In the form of the crate or coop shown by Figs. 1, 3, and 4 the removable slatted bottom 9 is of less length than the distance between the inner opposing edges of the lower hinge-strips 6 to permit the lower edges of removable ends 10 to rest in part on the upper surfaces of the lower rails 2, the said ends being first inserted in position in arranging the crate or coop for use and the bottom 8 afterward applied to

assist in holding the said ends in place by having the opposite ends of the bottom abut against the lower inner portions of the said ends 10. The removable ends 10 are of greater width than the distance between the inner opposing edges of the rails 1 and 2, and said ends are turned at a proper angle when applied to the interior of the crate or box to properly dispose them under the upper rails 1.

10 A removable cover or top 11 is inserted between the inner opposing edges of the upper rails 1, said cover being preferably imperforate and has a central cleat 12, secured by nails against the under side thereof, and also

15 similarly-secured cleats 13, adjacent to opposite ends of the cover or top to permit the opposite extremities of the latter to overlap the upper surfaces of the upper hinge-strips 6 and the outer edges of the cleats 13 to bear closely

20 against the upper extremities of the removable ends 10. The cleats 12 and 13 have one end of each flush with one side edge of the top or cover 11, and the opposite ends thereof projected outwardly beyond the remaining

25 side edge of the said top or cover to fit under one of the top rails 1 to hold the said top or cover down in place, and in addition fastenings may be used for securing the opposite ends of the top or cover to the upper hinged

30 strips, if desired.

In separating the parts of the crate or coop embodying the removable ends 10 the top or cover 11 is first withdrawn or detached, the bottom 8 next removed, and the ends 10 are

35 then turned at a proper angle and drawn upwardly through the body, thus leaving the latter free for folding operations. When the body is free of the top or cover, bottom, and removable ends, it may be reduced or collapsed, as shown by Fig. 2, and the remaining parts applied and secured thereto or held intact therewith for convenience in reship-

40 ping to a consignor or when a number of the crates or coops are transported in bulk. The removable ends and the top or cover may in some instances be also of slatted formation, or instead of slats wire-netting might be substituted, as in well-known poultry-coop constructions.

50 The form of the crate or coop shown by Fig. 5 embodies a stationary end 14, consisting of an imperforate closure, having the upper and lower ends let into grooves 15, formed in the inner edges of the hinge-strips 6 and secured

55 by nails or other analogous fastenings. In this construction the ends are folded with the remaining parts of the body and also set up for use with the latter, the bottom being detachable as well as the top or cover.

60 The main advantage in the improved crate or coop is that all the parts are of simple formation and are secured by a simple and inexpensive means. By illustrating removable and stationary ends the advantages and convenience of both air-tight or ventilating

means is contemplated and indicate that the crate or coop can be made with either style of ends, as desired. The arrangement of the panels and the manner of securing the same insures a positive retention thereof in position and the crate or coop which would be otherwise frail in structure is materially strengthened. When the crate or coop is set up and closed for transportation or shipment, an irregular method of gaining access to the contents of the crate—as, for instance, cutting the pivot or hinge fastenings 7 in two—would not permit any one so inclined to arrive at the result sought, as the bottom, top or cover, ends, and the securing strips or slats 5 would hold the parts of the crate or box together with sufficient strength for transportation purposes.

Modifications in the proportions, dimensions, and minor details may be resorted to without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. A crate or coop of the class set forth having side panels with end posts, upper and lower rails to which said panels are secured, the posts being of less length than the distance between the rails, pivot means inserted through the opposite extremities of the rails and extended partially into the posts, hinge-strips terminally interposed between the rails and the post ends and also having the pivot means passing therethrough, ends for the crate or coop, and a removable bottom and top.

2. A crate or coop of the class set forth having side panels with end posts, upper and lower rails to which the panels are secured, the distance between the opposite sides of the rails being greater than the length of the posts, hinge-strips terminally interposed between the ends of the rails and the posts, pivot devices extending through the ends of the rails and hinge-strips and partially projecting through the length of the posts, end closures held against the hinge-strips and posts, a removable bottom, and a detachable top or cover.

3. In a crate or coop of the class set forth, a body having side panels with end posts, upper and lower rails to which the panels are secured, the posts being of less length than the distance between the rails, and hinge-strips terminally interposed between the rails and the post ends, pivot means passing partially through the rails, hinge-strips, and posts, a removable bottom, and a detachable cover or top having cross-cleats on the under side thereof projecting beyond one side for removable insertion under one of the upper rails, the opposite extremities of the bottom and detachable cover or top being supported on the hinge-strips between the posts.

4. In a crate or coop of the class set forth,

the combination of a foldable body having end posts, upper and lower rails, and hinge-strips, the hinge-strips being interposed between the ends of the rails and posts, means
 5 for removably connecting the ends of the rails, hinge-strips and posts, a removable bottom insertible in and withdrawable through the upper portion of the body, a detachable top or cover, the bottom and top or
 10 cover being supported at their terminals on the hinge-strips between the posts, and end closures held within the body of the crate and maintained in position by the bottom and top or cover.

15 5. In a crate or coop of the class set forth, the combination of a foldable body involving upper and lower rails, end posts, and hinge-strips terminally interposed between the ends of the rails and posts, means for pivot-
 20 ally connecting the ends of the rails, hinge-strips, and posts, a removable bottom of slightly less length than the interior of the body, removable end closures against the lower portion of which the opposite extremi-
 25 ties of the bottom have contact, and a detachable top or cover having the opposite extremities held on the upper hinge-strips and also provided with means for engaging the upper portions of the removable end closures.

30 6. In a crate or coop of the class set forth, a collapsible body involving end posts, upper and lower rails, and hinge-strips interposed between the ends of the rails and the posts, means for pivotally connecting the ends of
 35 the rails, hinge-strips and posts, a removable bottom, removable end closures against the lower portion of which the said bottom has bearing, and a detachable top or cover hav-

ing cross-cleats projecting therefrom at one side to engage the under portion of one of the
 40 upper rails, and also provided with means for contacting with the upper portions of the end closures, the opposite extremities of the top or cover being held on the upper hinge-strips
 45 between the upper rails.

7. In a crate, the combination of sides and ends having intersecting members including upper and lower hinge-strips which are re-
 spectively located below the upper and lower portions of the crate, pivot devices extending
 50 through portions of said members and inserted in reverse position, said pivot members projecting only partially through the vertical extent of the corners of the body, a remov-
 55 able bottom, and a removable top terminally engaging the upper hinge-strips.

8. In a crate or coop of the class set forth, the combination of side panels having end posts and vertical securing-strips projected
 above and below the same, upper and lower
 60 rails to which the securing-strips are attached, the distance between the opposing sides of the rails being greater than the length of the posts, hinge-strips terminally interposed be-
 65 tween the rails and posts, pivot devices extending through the rails and hinge-strips and projecting partially into the posts, end closures, a removable bottom, and a detach-
 able top or cover.

In testimony whereof I have hereunto set
 70 my hand in presence of two subscribing witnesses.

ELLSWORTH SPERLING.

Witnesses:

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 W. K. ECKMAN.