To all whom it may concern:

Be it known that I, ODELON J. LA BAUVE, a citizen of the United States, residing at Edna, in the county of Jackson and State of Texas, have invented new and useful Improvements in Coops or Crates, of which the following is a specification.

This invention relates to crates or coops and particularly to the collapsible or folding type adapted for holding and transporting poultry and other live stock.

The primary object of the invention is to provide a crate or coop having a strong and durable construction, and capable, when not in use, of being reduced to compact form for return shipment or storage.

A further object of the invention is to provide means for conveniently assembling the complemental parts of a crate or coop and minimize as much as possible the number of parts used, especially at the hinge joints for the sides and ends.

A further object of the invention is to provide a separable cover having simple and additional means for retaining the same in place when the crate or coop is arranged for use.

With these and other objects and advantages in view, the invention consists of the construction and arrangement of the several parts which will be more fully hereinafter disclosed.

In the drawings: Figure 1 is a perspective view of a crate or coop embodying the features of the invention. Fig. 2 is a longitudinal vertical section of the same taken on the line 2—2, Fig. 1. Fig. 3 is a detail side elevation of the cover. Fig. 4 is a detail elevation of a portion of the coop. Fig. 5 illustrates detailed perspective views of the members composing each hinge joint. Fig. 6 is a detail perspective view showing a portion of the crate or coop and a modified form of the cover.

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

The numeral 1 designates the bottom or floor of the crate constructed from any suitable material, preferably wood, and supported and strengthened by means of bars or sills 2 which are disposed lengthwise at the opposite side edges of the bottom or floor.

At the corners of the bottom or floor 1 are supporting brackets comprising securing members 3 and vertical members 4. Each of the supporting brackets is so disposed that the vertical member will be located adjacent to the end edge of the bottom or floor 1, and the inwardly extending securing member is attached to the bottom and adjacent portion of the sill 2 by bolts or analogous fastenings 5, the sill giving additional strength to the fastenings 5 and insuring a rigid application of each supporting bracket. Each vertical member 4 is formed with an opening 6 located to one side of the vertical center of the said member and nearer the inner edge of the latter. The upper end of the member 4 has an outer shoulder 7, the said edge from the shoulder inwardly being curved or rounded as at 8 for a purpose which will be more fully hereinafter specified.

Secured on the lower corners of the sides 9 and ends 10 are pindle brackets 11 and 12, consisting of angle-irons having pindle projections 13 and 14 respectively extending outwardly therefrom at the angles of each, the pindle projection or pin 13 of the bracket 11 secured to each side 9 engaging the opening 6 of the member 4 of the supporting bracket, and between the vertical member 15 of the pindle bracket 11 and the member 4 a lower eye-member 16 of a hinge link 17 is interposed, the pindle projection or pin 13 extending through the said eye-member 16, as clearly shown by Fig. 4. The upper eye-member 18 of the hinge link stands in a plane at right angles to the lower member 16 and movably receives the pindle projection or pin 14 of the pindle bracket 12 secured to the end 10 of the crate or coop, and by this means the lower edges of the ends 10 are elevated above the lower edges of the sides 9 so that the said ends may conveniently fold over the sides when the coop or crate is collapsed. It will be seen that the several hinge links 17 will have more or less movement or will not present a rigid resistance when the sides 9 and ends 10 of the crate or coop are folded, and hence there will be less wear and strain on the pindle projections 14 of the pindle brackets 12 secured to the ends 10. A further advantage of this construction is that in the event of breakage of any one of the links a substitution for the same may be readily made at
a minimum cost without requiring the replacement of the entire hinge joint members, and this is also true of the supporting brackets. This capability of substitution of individual parts will facilitate repair of the crate hinges at a small cost and result in economy in the use of devices of this class. The several hinge links are held in place by engagement of the intermediate edges 19 thereof with the rounded edges 8 of the members 4; and, further, the outer face of each member 18 contacts with the adjacent shoulder 7 of the member 4 to give stability to the hinge joint at each corner when the sides 9 and ends 10 are elevated in operative positions and also to assist in maintaining the hinge links in proper assembled relation to the remaining parts.

The frames 20 and 21 of the sides 9 and ends 10 are preferably constructed of stiff sheet metal bent at an angle, as shown by Fig. 6, with the horizontal flanges thereof extending inwardly; and secured over the sides and ends is a suitable wire screen 22 25 which may be made up in any preferred manner.

The upper corners of the ends 10 have locking clips 23 attached thereto and formed with slots 24 to fit over staples 25 secured on the adjacent corners of the sides 9 and to complete the attachment of these upper corners of the sides and ends, hooks 26, which are attached to the adjacent portions of the sides, are used and engage the staples 25. It is preferred that the hooks 26 be secured on the upper portions of the sides 9 and ends 10, as shown by Fig. 4.

The cover 27 is separately fitted or applied to the coop or crate and comprises angular end bars 28 preferably formed of sheet metal and connected by longitudinal tie bars 29 secured to the end bars at a distance inwardly from the ends of the latter. The one longitudinal bar 29 is also angular in cross-section and at the center is provided with a staple 30 for engagement by a latch 31 movably attached to the center of the adjacent top bar of the frame of one of the sides 9, a hook 32 being used to complete the locking engagement 31 of the latch 31 with the staple 30 and attached to the bar 29 carrying the said staple. The extremities of the end bars 28 adjacent to the longitudinal tie bar 29 carrying the staple 30 are cut away or recessed, as at 33, so as to permit a portion of these extremities to project over the top of the frame of the side 9 carrying the latch 31, the depending flanges of the end bars 28 abutting against the top bar of the frame of the side 9. The abutting shoulders formed by the recesses 19 are in planes at right angles to the adjacent projected portions of the end bars 28, but at the opposite extremities of the said end bars, recesses 34 are constructed and have inner oblique walls 35 which extend under the top flanges of the side 9 opposite that carrying the latch 31 to prevent the cover at this side from having loose movement and becoming disengaged after the latch 31 is secured to the staple 30 by the hook 32, as hereinbefore explained. This construction of the end bars of the cover 27 permits the said cover to have one side first applied and then moved down to horizontal position and secured by the latch 31, and after the latch has been secured to the adjacent longitudinal tie bar 29 of the cover the latter will be firmly held in applied position, but always in condition for quick dissociation. The cover will also have a suitable screen fabric 36 secured thereto, and at the center an opening 37 is formed and provided with a stiff margin wire or frame 38 with which a hinged gate 39 coöperates. The gate 39 may be opened to permit access to the interior of the coop or crate to remove the fowl or to introduce feed and water within the coop. The cover will be prevented from slipping out of place when applied or from moving sidewise in view of the two points of engagement set up between the oblique walls 35 of the recess 34 and the top bar of the one side frame 9 when the latch 31 has been secured to the cover as shown by Fig. 1; and if there should be any tendency to movement after wear of the parts, the adjacent edge portions of the hooks 26 adjacent to the points of engagement of the opposite extremities of the bars 28 with the top bars of the sides 9 will obstruct such movement.

In the modified form of the cover shown by Fig. 6, the end bars 40 are connected by longitudinal tie bars 41 similar in construction to those shown by Figs. 1, 2 and 3. In this instance, however, the latch 42 is rigidly secured to one tie bar 41 and has an opening or slot 43 to fit over a staple 44 on the upper bar of the frame of the adjacent side 9, a hook 45 secured on the said upper bar being used to complete the lock of the latch to the upper part of the side. In this instance, the end bars 40 have two of their extremities extending loosely across the top bar of the frame of the one side carrying the staple 43 in the opposite extremities provided with longitudinal slots 46 to removable fit under headed studs 47 on the top bar of the frame of the opposite side 9. This modified form of the cover will also be provided with a suitable wire screen and may have a central opening similar to that disclosed by Fig. 1.

The crate or coop may be collapsed or folded by detaching the cover and turning the sides 9 inwardly and subsequently likewise arranging the ends. The detached
cover may then be suitably secured on the infolded sides and ends and by this means the crate or coop is reduced to compact form, and a number of the same may be stored within a comparatively small space, either for return shipment or for storage when not in use. The advantages of a folding crate for return shipment are well known, especially in respect to the difference in freight rates and also less liable to be injured by rough handling.

The crate or coop may be made in various sizes, and changes in the proportions, dimensions and minor details may be adopted without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new, is:

1. A folding crate comprising a bottom, supporting brackets secured at the corners of the bottom, sides and ends having pintle brackets secured to their lower corners and provided with pintle projections, hinge links having upper and lower members at angles to each other, the pintle projections of the sides extending through the lower members of the hinge links and portions of the supporting brackets and the pintle projections of the ends extending through the upper members of the hinge links, and means for maintaining the sides and ends in operative assembled relation.

2. A folding crate comprising a bottom, sides and ends, hinge organizations for the lower corners of the sides and ends and embodying pintle projections on the latter, supporting brackets secured to the corners of the bottom, and hinge links interposed between the lower corners of the sides and ends and the supporting brackets and engaged by the pintle projections.

3. A folding crate comprising a bottom infolding sides and ends, the lower corners of the sides and ends having pintle projections and the bottom provided with supporting brackets having upstanding members, and hinge links interposed between the supporting brackets and the lower corners of the sides and ends and engaged by the pintle projections, the hinge links having upper members to receive the pintle projections of the ends to elevate the lower edges of the latter above the lower edges of the sides.

4. A folding crate comprising a bottom, infolding sides and ends provided with pintle projections at their lower corners, supporting brackets secured to the corners of the bottom and having upstanding members, and hinge links assembled in loose relation to the supporting brackets and having lower and upper members for engagement by the pintle projections of the sides and ends, the upper members of the hinge links being in planes at right angles to the lower members of the same.

5. A folding crate, comprising a bottom, infolding sides and ends, and a hinge organization at the lower corners of the sides and ends and the corners of the bottom and including hinge links having upper and lower members at angles to each other, the hinge links being loosely assembled with relation to the remaining parts of the hinge organization.

6. A folding crate comprising a bottom, infolding sides and ends, and a hinge organization consisting of supporting brackets secured to the corners of the bottom and having upstanding members with outer shoulders and upper rounded edges, pintle brackets secured to the lower corners of the sides and ends and provided with pintle projections, and hinge links loosely assembled with relation to the supporting brackets and having upper and lower members respectively engaged by the pintle projections of the ends and sides and disposed at angles to each other, the upper members of the hinge links projecting over on the upper rounded edges of the upstanding members of the supporting brackets and also engaging the shoulders of the latter when the sides and ends are in operative position.

7. A folding crate comprising a bottom, infolding sides and ends having pintle means and brackets for connecting the same to each other, members loosely interposed between the brackets and portions of the infolding sides and ends and engaged by the pintle means, clips secured on the upper corners of the ends, and fastening means carried by the adjacent upper corners of the sides for engagement by the clips.

8. A folding crate comprising a bottom, infolding sides and ends, hinged means connecting the lower corners of the sides and ends and the bottom to each other and including brackets and pintle means, members loosely assembled between the lower corners of the sides and ends and brackets and engaged by the pintle means, and fastening means at the upper corners of the sides and ends.

9. A folding crate comprising a bottom, sides and ends movably attached to the bottom, a removable cover having supporting bars with angularly recessed extremities projecting outwardly therefrom to engage the upper portions of the sides to prevent loose movement of the cover, and locking means cooperating with the cover and one of the sides.

10. A crate comprising a bottom, sides and ends movably attached to the bottom, a removable cover having end bars, a portion of the extremities of the end bars having a sep-
arable locking engagement with one of the frames of the crate and the remaining portions of the extremities of the end bars extending loosely over the upper portion of an opposite frame, and means for locking the one side of the cover to the frame of the coop over which the extremities of the end bars loosely extend.

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

ODELON J. LA BAUVE.

Witnesses:
F. G. Moffett,
W. W. McCrory.