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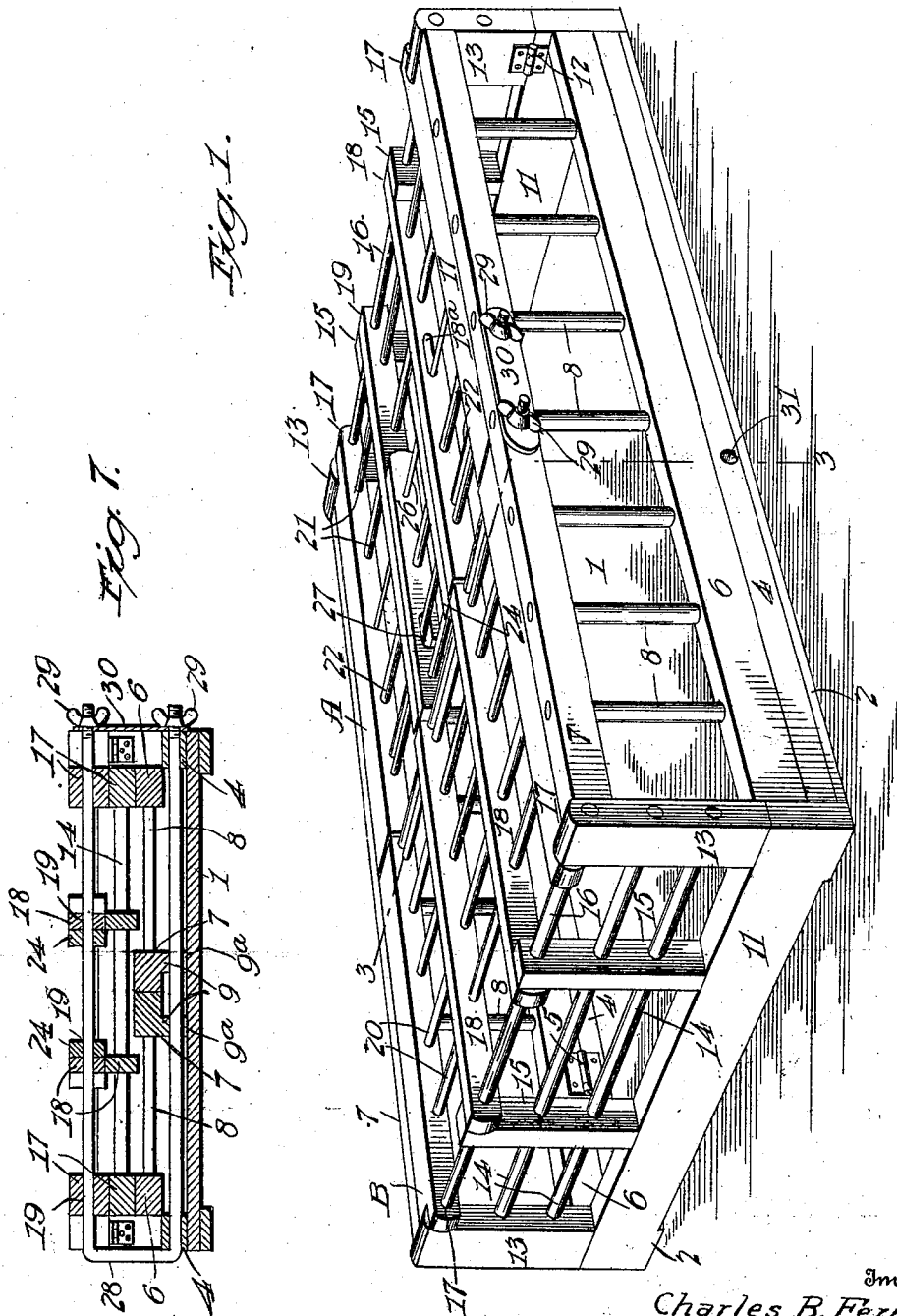
FOLDING SHIPPING CRATE OR COOP.

APPLICATION FILED AUG. 10, 1909.

Patented Dec. 6, 1910.

3 SHEETS—SHEET 1.

977,791.



Witnesses

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Fig. 5.

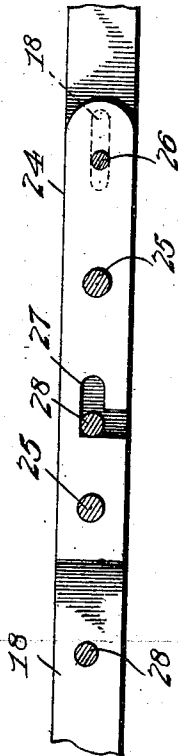
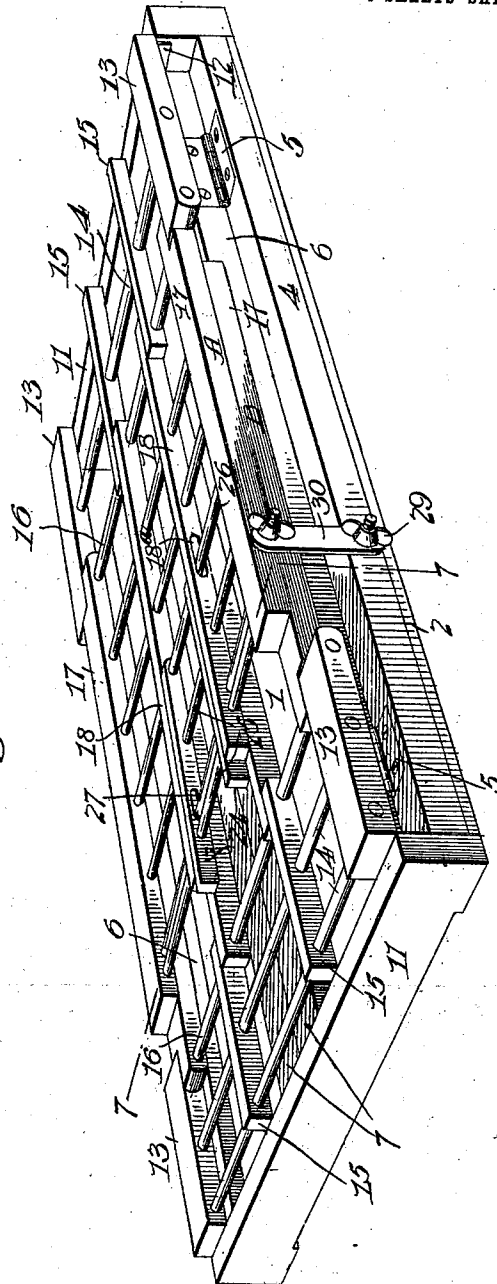


Fig. 2.



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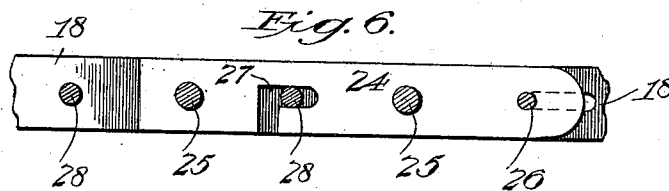
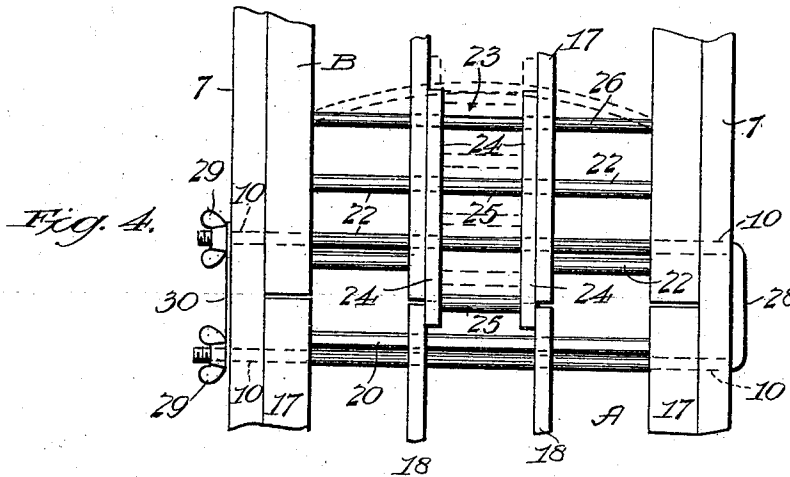
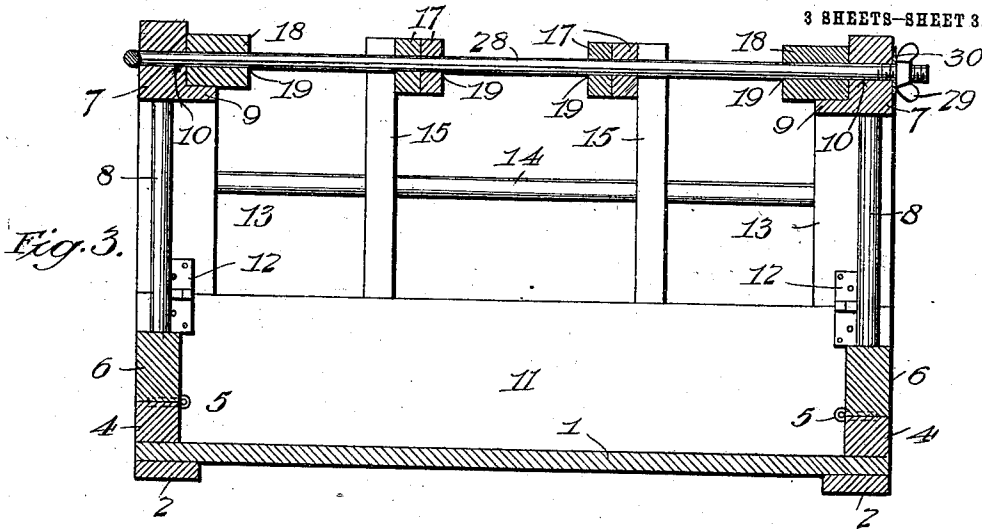
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FOLDING SHIPPING CRATE OR COOP.

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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CHARLES B. FERRELL AND JUNIOUS M. PERRINE, OF SPENCER, WEST VIRGINIA.

FOLDING SHIPPING CRATE OR COOP.

977,791.

Specification of Letters Patent.

Patented Dec. 6, 1910.

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To all whom it may concern:

Be it known that we, CHARLES B. FERRELL and JUNIOUS M. PERRINE, citizens of the United States, residing at Spencer, in the county of Roane and State of West Virginia, have invented certain new and useful Improvements in Folding Shipping Crates or Coops, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to shipping crates or coops of the foldable or knockdown type, in which a novel type of fastener is employed for retaining the same in its set-up condition or in its folded condition, so that a strong and serviceable structure is assured when in a set-up condition, and which when in its folded condition will be held in a neat and compact form to minimize space in packing or shipping.

In connection with the foregoing the invention also contemplates the employment of a suitable base to which the foldable sections of the crate or coop are hinged in such a manner that when folded onto said base said parts will be closely nested so that the whole structure when collapsed will be extremely compact.

The invention also contemplates the employment of a novel type of gate or door through which access may be had to the interior of the crate or coop.

In carrying out the objects of the invention generally stated above, it will, of course, be readily understood that the essential features thereof are susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein—

Figure 1 is a perspective view of the coop or crate in a set-up position. Fig. 2 is a similar view of the crate or coop in a folded or collapsed position. Fig. 3 is a transverse sectional view taken on the line 3—3, Fig. 1. Fig. 4 is a fragmentary plan view of a portion of the top of the crate or coop showing the gate or door thereon. Figs. 5 and 6 are detail side elevations showing the slidable connection between the gate or door and the top of the crate. Fig. 7 is a transverse sectional view taken on the line 7—7, Fig. 2.

Referring to the drawings by numerals, 1 designates the flooring of the crate or coop which is supported upon the side sills 2

which extend longitudinally of the coop, the edges of said floor 1 being the support for the longitudinally extending bed timbers 4 which have a strap or other type of hinge connection 5 with the bottom member 6 of the side frames. Said side frames are formed of the bottom member 6 and top member 7 which are connected by means of the spaced apart slats or panels 8. The said top members 7 of the side frames are each provided with an inwardly extending flange 9 which forms a seat for the top of the coop or crate, as will presently appear. A pair of spaced apart openings 10 are formed transversely through each top member above their seat flange, the openings in each side member being in alinement.

The ends of the crate or coop are formed of a base member 11 which is securely attached to the side sills and the side bed timbers and which has a strap or other hinge connection 12 at each end with end posts 13 which are connected by means of the spaced apart slats or panels 14, intermediate posts 15 being employed to impart strength and rigidity to the same. The upper portions of the end and intermediate posts have alined openings formed through them for the reception of a hinge or pivot rod 16 with which the longitudinal side and intermediate members 17 and 18 of the top of the crate or coop have a hinge or pivotal connection. The said top of the crate or coop is divided transversely into two sections which are of substantially the same length so that when resting on the seat flanges 9 of the upper members 7 of the side frames, their free ends will meet at substantially the center of the crate or coop. The side members 17 of the top sections are preferably of heavier, or thicker, material than the intermediate members 18, and said members 17 and 18 are preferably spaced apart an equal distance and adjacent to their free ends they are provided with alined transverse openings 19 which also aline with the transverse openings formed through the upper portion of the side members 7 of the side frames. One section is provided with slats or panels 20 which pass through the intermediate members 18 and have their ends secured within the side members 17. The other section is also provided with slats or panels 21 some of which pass through the intermediate sections and have their ends secured within the side members 17, the

other panels or slats 22 only connecting one side member with the intermediate member adjacent thereto. This arrangement of the sections provides ample clearance space for the swinging or sliding movements of a gate or doorway 23 between the free ends of the intermediate members 18.

The details of the said gate or door 23 are set forth more fully in Figs. 4, 5 and 6 of the accompanying drawings, and by reference thereto it will be observed that the same is composed of the side beams 24 which are connected by the slats or panels 25, the rear ends of said beam being pivotally mounted upon a spring hinge rod 26 which extends transversely through the intermediate members 18 of the top section and has its ends secured within the side members 17. Adjacent to their forward, or free ends, the side beams 24 of the gate or door are each provided with a bayonet slot 27, the entrance to which is at the bottom of the beams, and when the door or gate is in a closed position, is slightly in advance of the alined openings through the end of the section in which it is mounted and the openings through the side members of the side frame.

The coop or crate is held in a set-up position by means of a U-shaped fastener 28 one leg of which is passed through the alined openings of the two upper members of the side frames and through the openings in the ends of the longitudinal members of the section A of the top of the crate or coop, the other leg of the fastener passing through the other alined openings of the upper members of the side frames and through the free ends of the longitudinal members of the top section B and across the clearance space between the intermediate members 18 and in the path of movement of the gate or door carried thereby and serves as a locking bolt for retaining said gate or door closed, as will be presently explained. The ends of the U-shaped fastener 28 project beyond the top member of one of the side frames and are threaded for the reception of thumb nuts 29 which holds one end of a strap 30 on each threaded end so as to prevent the fastener moving to an unlocked position. Preferably the top members 7 of the side frames project above the level of the top of the ends of the crate or coop, and as the same are of rather heavy timber, it will be seen that they protect the coop or crate from damage such as might result from other coops or crates being piled thereon, and also permit a circulation of air through said top.

As been stated before, the fastener 28 has one of its legs extending in the path of movement of the gate or door, said leg being slightly behind the entrance to the bayonet slots 27 in the sides thereof. To lock

said gate or door to said leg, the door is pushed rearwardly against the tension of its pivot rod 26, to cause the entrance of the bayonet slots to aline with said leg, whereupon the gate or door may be brought into engagement with said leg and the tension of its spring hinge or pivot rod 26 will move the door or gate forwardly to cause the said leg to be well within the bayonet slot. A reversal of the movement of the door or gate will permit the same to be readily disengaged from said leg. To facilitate the expansion and contraction of the spring hinge rod 26, the intermediate members 18 are provided with slots 18^a through which said rod passes.

As has been thus far described, the manner of holding the hinged or foldable sections of the crate or coop together is the preferred one for holding the same when in a set-up position, and when in such position it will be understood, the U-shaped fastener is in a horizontal position. To collapse or fold the crate and coop, and hold the same in such position, the U-shaped member has its end-locking thumb nuts removed, the fastening strap is removed from said ends, and the said fastener is pulled from the openings through the top and side members. The side members are then folded in until their seat-flanges rest upon the floor of the crate or coop and then the ends are folded in on top of the side frames with the two top sections A and B overlapping one another, which brings the free ends of the overlapping top section in position so that the openings formed through the longitudinal members thereof will be directly, or substantially directly above an opening extending transversely through each side sill 2, said openings 31 being in alinement with each other so that the U-shaped fastener 28 may have one of its legs passed through said openings 31 of the sills 2 and its other leg passed through the openings in the ends of the longitudinal members of the overlapping top section, and be held in such position by means of the strap 30 and thumb nuts 28 which engage with its projected ends. To facilitate the passage of the leg of the U-shaped fastener across the floor 1 the seat flanges 9 have their longitudinal edges notched or cut-away as indicated at 9^a.

From the foregoing, it will be seen that the present crate or coop is one that may be readily set up and held in such position in a rigid and secure manner, yet the same may be quickly folded or collapsed and held in such condition by the same fastener that holds it in a set-up position. And it will also be observed that by the described mounting of the door or gate and the locking means therefor, the crate or coop may be securely closed, yet readily opened when

access to the interior is necessary or desirable.

We claim as our invention:—

5 A folding crate comprising a flooring, bed timbers secured to said flooring sides and ends hinged to said bed timbers, top members pivotally mounted upon said ends, said top and side members being provided with series of apertures formed in alignment, said bed timbers being provided with
10 apertures formed in alinement with one of

said series of apertures and a U-shaped locking member adapted to pass through the aligned said apertures to retain said crate in a set-up or folded position.

In testimony whereof we hereunto affix
our signatures in presence of two witnesses. 15

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