P. C. ICKES.

COLLAPSIBLE CRATE.

APPLICATION FILED AUG. 27, 1915.

Patented June 19, 1917.

2 SHEETS—SHEET 1.

1,230,831.

Fig 1.

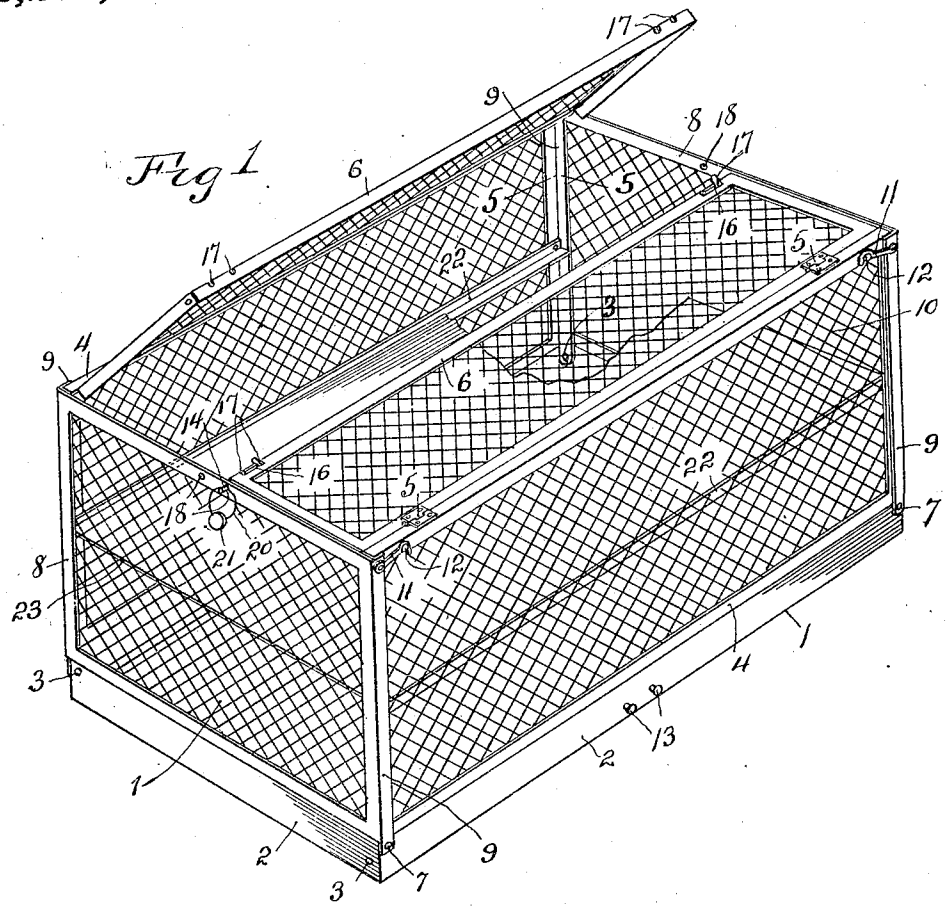
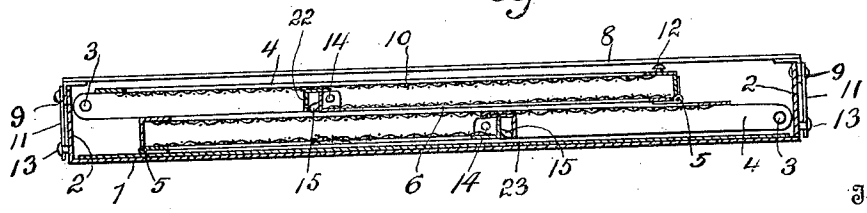


Fig 2.



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2 SHEETS—SHEET 2.

Fig 3

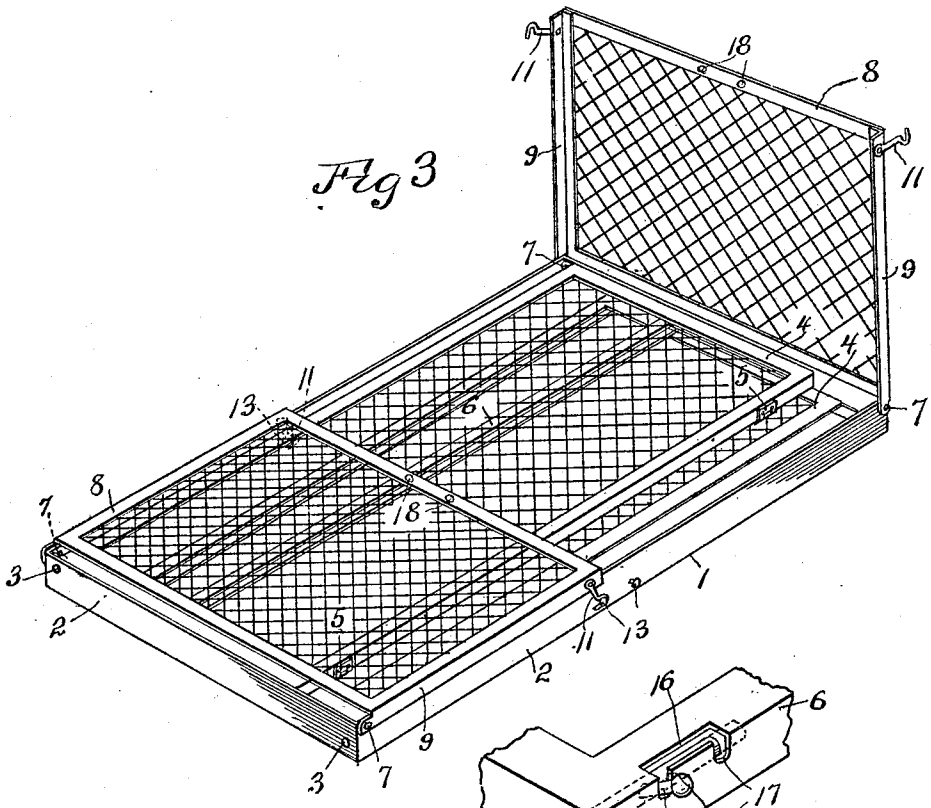


Fig 4

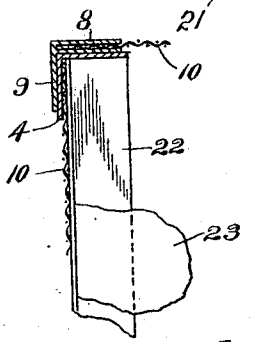


Fig 5

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COLLAPSIBLE CRATE.

1,230,831. Specification of Letters Patent. **Patented June 19, 1917.**

Application filed August 27, 1915. Serial No. 47,613.

To all whom it may concern:

Be it known that I, PETER C. ICKES, a citizen of the United States, residing at Chanute, in the county of Neosho and State of Kansas, have invented a certain new and useful Improvement in Collapsible Crates, of which the following is a specification.

My invention relates to improvements in collapsible crates.

The object of my invention is to provide a crate which is particularly adapted for the transportation of poultry, which may be easily and quickly converted from a double-decked crate, in which form it is adapted for holding chickens, to a single deck crate adapted to hold large fowls, such as turkeys and geese.

A further object of my invention is to provide a collapsible crate of relatively large capacity and which will permit access to the fowls of a relatively large amount of fresh air, thus eliminating danger of the fowls suffocating from crowding together without the proper amount of fresh air.

Another object of my invention is to provide a crate which may be collapsed into small space and in a form which will permit packing together compactly a number of crates one upon the other.

Still another object of my invention is to provide novel means by which the folding parts of the crate may be releasably locked together in the collapsed or expanded positions.

My invention provides still further a crate of novel construction which is strong and durable, which is light, and which may be cheaply manufactured.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings, which illustrate the preferred embodiment of my invention,

Figure 1 is a perspective view of my improved crate, shown in the expanded form, one of the cover members being closed and the other cover member partly raised.

Fig. 2 is an enlarged cross section of the crate, shown collapsed.

Fig. 3 is a perspective view of the crate shown partly collapsed.

Fig. 4 is an enlarged perspective view of a portion of one of the cover members, showing the locking device thereof.

Fig. 5 is a horizontal sectional view on the line 5—5 of Fig. 1, the view being enlarged.

Similar reference characters designate similar parts in the different views.

The body of the crate comprises the following described parts.

1 designates the bottom member, which is preferably solid, and which is provided with upwardly extending vertical flanges 2, which gives the bottom member a pan-shape. Pivoted to and between two opposite flanges 2 by means of horizontal pins 3 are two side members comprising preferably rectangular frames 4, the lower edges of which are hinged by the pins 3 to the bottom member, and the upper or free edges of which have respectively pivoted thereto by hinges 5 two cover members 6, which are adapted to be swung from positions parallel with and at the inner sides of the members 4, as shown in Fig. 2, to closed positions at right angles thereto, as shown in Fig. 1.

Respectively pivoted by horizontal pins 7 to the two other flanges 2 are two side members 8, which are preferably rectangular frames hinged at their lower edges to the bottom member 1 by the pins 7, and which are each provided at opposite ends respectively with inwardly extending flanges 9, which in the upright position of the members 4 and 8, Fig. 1, are adapted to overlap the outer sides of the adjacent side members 4.

The flanges 9 are also adapted, when the members 8 are swung to the collapsed position, shown in Fig. 2 and also in Fig. 3, to overlap the flanges 2 to which said side members 8 are respectively pivoted.

The side members 4 and 8 and the cover members 6 may have their frames covered with the usual wire netting 10.

For locking the side members 4 and 8 in the upright position, four hooks 11 are respectively pivoted to the flanges 9 adjacent to the upper ends thereof and are respectively adapted to releasably engage outwardly extending pins 12 secured to the outer sides of the side members 4.

The hooks 11 are also adapted to engage pins 13 which extend outwardly from the two side flanges 2, as shown in Figs. 2 and 3.

For locking the cover members 6 in the closed position, each cover member has slidably mounted in it adjacent to its respective ends and adjacent to its free edge, two longitudinally slidable cylindrical bolts 14, Fig. 4, each of which is provided with a laterally extending arm 15. Each cover

member 6 is provided with a longitudinal slot 16, in which the adjacent arm 15 is slidable. The slots 16 each terminate in lateral notches 17 adapted to receive the adjacent arm 15 to hold the bolt 14 from sliding from either the locked or the unlocked position.

The side members 8 are each provided with two transverse holes 18 adjacent to the upper edge thereof, and adapted to respectively receive the adjacent bolts 14, when the latter are moved to the locked position shown in Fig. 4.

For preventing the bolts 14 being moved to the unlocked position by any unauthorized person, each bolt is preferably provided with a transverse hole 19, Fig. 4, disposed adjacent to its outer end and adapted to receive therethrough a wire loop 20 having attached to it a lead seal 21. In the locked position, the loop 20 will be outside of the adjacent member 8 and will prevent the inward retraction of the bolts 14 through the members 8.

Rigidly secured to the inner sides respectively of the side members 4 and spaced apart from and disposed above the bottom member 1, are two longitudinal floor supports comprising, preferably, two angle bars 22, having inwardly extending flanges, which are adapted to support a removable floor member comprising a rectangular plate 23, shown in Fig. 1.

The floor member 23 is disposed on the supporting members 22, when it is intended to ship small fowls, such as chickens and ducks, in the crate. With the floor member 23 so disposed, the crate is double-decked and is provided with two compartments disposed one above the other. With my invention, so arranged, more fowls have access to fresh air, than is possible in crates of like capacity, but in which but a single large compartment is provided.

When it is desired to ship large fowls, such as turkeys or geese, the floor member 23 may be disposed upon the floor 1. The crate will then have but a single compartment having the combined heights of the two compartments provided when the floor member 23 rests upon the supports 22.

To collapse or knock down the crate, it is but necessary to remove the loops 20, retract the bolts 14 and unhook the hooks 11 from the pins 12.

The side member 4, at the right, as viewed in Fig. 1, is then swung to the horizontal position, the cover member 6 hinged thereto being first swung to a position parallel therewith. The other side member 4, after its cover member 6 has been swung to the parallel position, is swung to the horizontal position upon the other side member 4, as shown in Fig. 2.

The other side members 8 are then swung to the horizontal position, and the hooks 11 are engaged with the adjacent pins 13 of the bottom member 1. The crate is thus held firmly locked in flat compact form convenient for shipment or for storage.

I do not limit my invention to the structure shown and described, as modifications, within the scope of the appended claim, may be made without departing from the spirit of my invention.

What I claim is:—

A collapsible crate comprising a bottom member, two side members hinged thereto so as to swing from an upright position to a position one over the other on the bottom member, two cover members respectively hinged to the upper edges of said side members and adapted to swing at right angles thereto and parallel therewith, two pairs of longitudinally movable bolts mounted one pair on each cover member respectively adjacent to opposite ends thereof, two side members hinged to the bottom member so as to swing from an upright position to a collapsed position over the bottom member and provided with means for being releasably engaged by the adjacent ones of said bolts when the last named side members are upright, and the cover members are in the closed position, and means carried by the last named side members for releasably locking said members to the bottom member in the collapsed position and arranged to releasably lock the last named side members to the first named side members when the side members are in the upright position.

In testimony whereof I have signed my name to this specification.

PETER C. ICKES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."