P. C. ICKES.

COLLAPSIBLE CRATE.

APPLICATION FILED JUNE 1, 1915.

1,230,830.

Patented June 19, 1917.

2 SHEETS—SHEET 1.

Fig 1

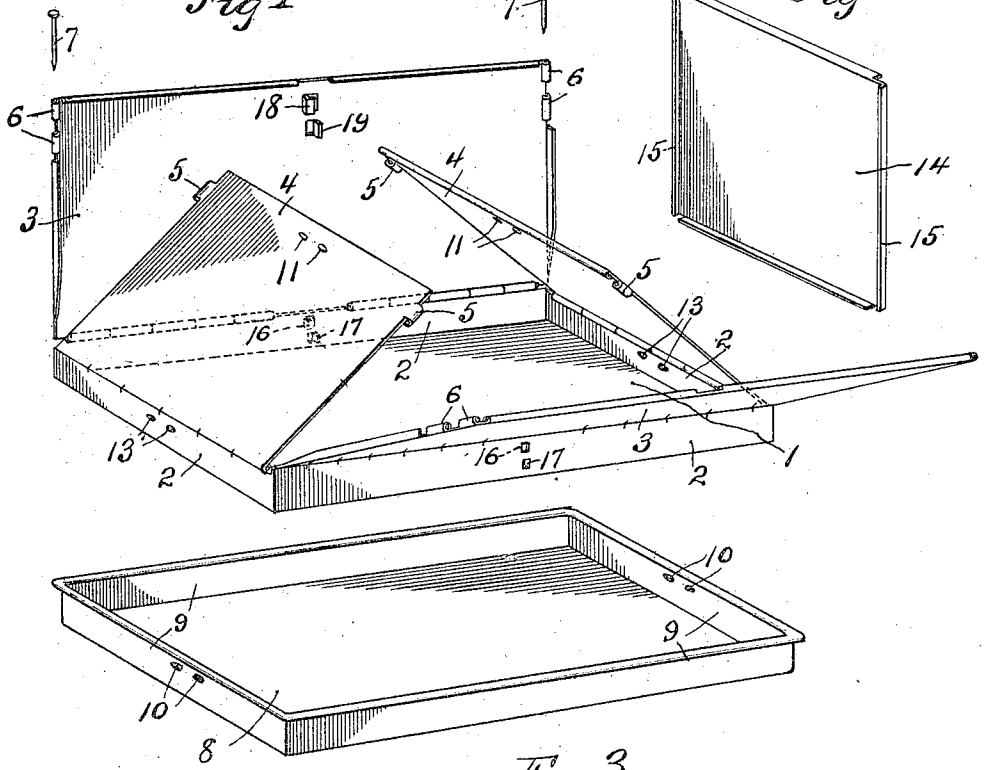
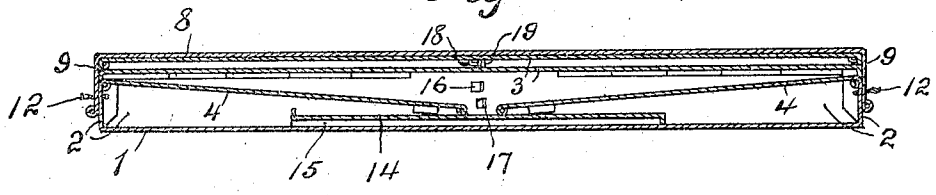


Fig 2

Fig 3

Fig 4



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2 SHEETS—SHEET 2.

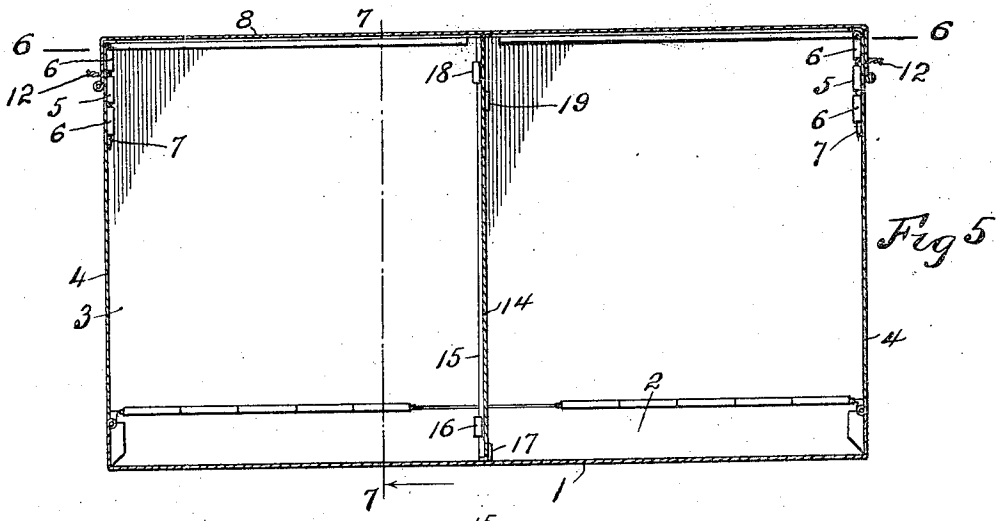


Fig 5

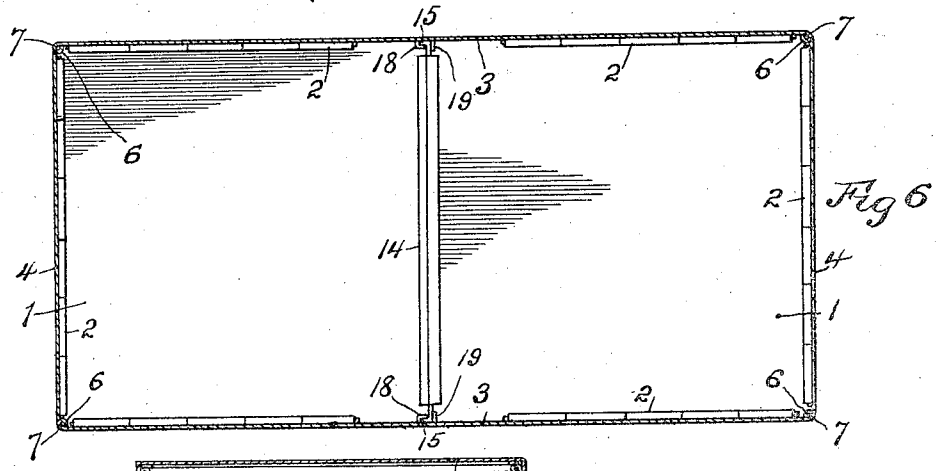


Fig 6

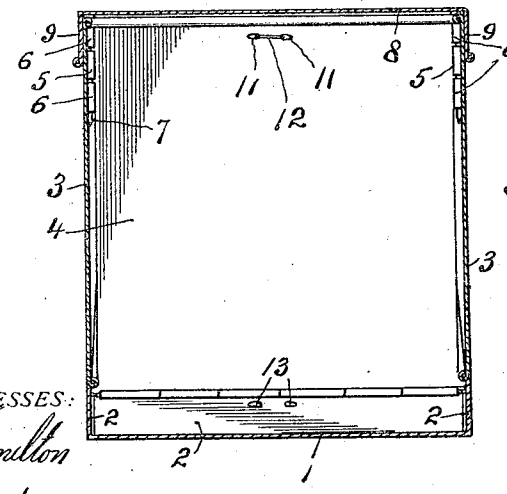


Fig 7

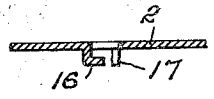


Fig 8

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COLLAPSIBLE CRATE.

1,230,830. Specification of Letters Patent. Patented June 19, 1917.

Application filed June 1, 1915. Serial No. 31,507.

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 collapsible crate which may be extended or collapsed so as to form, in effect, two crates or boxes of different capacity.

My invention is particularly adapted in its extended form for the shipment of eggs, and in its collapsed condition it forms a box of sufficient capacity to contain the fillers in which the eggs are shipped.

A further object of my invention is to provide a crate of novel construction, which is cheap to manufacture, is strong and durable and which may be easily and securely fastened in the expanded or collapsed condition.

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 partly collapsed, the partition and cover being removed.

Fig. 2 is a perspective view of the partition.

Fig. 3 is a perspective view of the cover.

Fig. 4 is a longitudinal sectional view of the crate shown collapsed and in locked condition ready for shipment.

Fig. 5 is a longitudinal vertical sectional view of the crate in the locked expanded position.

Fig. 6 is a horizontal sectional view on the line 6—6 of Fig. 5, the cover being removed.

Fig. 7 is a vertical sectional view on the line 7—7 of Fig. 5. Fig. 8 is an enlarged horizontal sectional view of a portion of one of the flanges of the bottom member.

Similar reference characters designate similar parts in the different views.

1 designates a bottom member provided with upwardly extending edge flanges 2, to which are respectively hinged two pairs of side members 3 and 4, which are adapted to be swung from the upright position shown in Fig. 5 to the collapsed position shown in Fig. 4.

For locking the side members together in the upright position, each side member 4 is provided at opposite side edges with tubular portions 5 which are adapted to respectively be disposed between and in vertical alinement with tubular portions 6, two of which are provided spaced apart from each other and in longitudinal alinement with each other, at each side edge of each side member 3 adjacent to the free edge thereof.

When the side members 3 and 4 are in the upright position, shown in Figs. 5, 6 and 7, securing devices, such as nails or pins 7 may be respectively inserted through the alined tubular portions 5 and 6 so as to releasably lock the side members 3 to the side members 4. Upon withdrawing the pins or nails 7 from the tubular portions 5 and 6, the side members 3 and 4 may be swung to the collapsed position upon the bottom member 1, as shown in Fig. 4.

A cover 8, shown inverted in Fig. 3, is provided with downwardly extending flanges 9 which are adapted to embrace respectively the members 3 and 4, when the latter are in the upright position shown in Figs. 5 and 7. When the cover 8 is thus disposed, it will be over the nails or pins 7 and will prevent their accidental withdrawal from the tubular portions 5 and 6.

In order that the cover 8 may be releasably secured to the side members 3 and 4, two oppositely disposed flanges 9 of the cover are provided each with a pair of openings 10, which are adapted to respectively register with openings 11, a pair of which is provided in each of the side members 4 adjacent to the upper edge thereof. When the cover is mounted on the side members 3 and 4, as shown in Figs. 5 and 7, pieces of wire 12 may be looped through the pairs of openings 10 and 11, which are in register with each other and the ends of the wires twisted together as shown in Fig. 5.

Upon removing the wires 12, the cover 8 may be removed, following which the pins or nails 7 may be withdrawn and the sides 3 and 4 swung to the collapsed position shown in Fig. 4, after which the cover 8 may be slipped over the flanges 2 of the bottom member 1, the parts so disposed forming a shallow box which is adapted to contain egg fillers or other articles or material, not shown.

For locking the cover 8 to the bottom member 1, opposite flanges 2 of the latter

are each provided with two openings 13 which are adapted to register respectively with the openings 10 of the cover. Through the openings 10 and 13 may be looped respectively pieces of wire 12, Fig. 4, the ends of the wires being twisted together, so as to secure the cover to the bottom member in the same manner as the cover is secured to the side members 3 and 4.

For the purpose of dividing the crate into two compartments, when desired, I provide a partition 14, shown in Fig. 2, opposite longitudinal edges of which are provided with lateral flanges 15 adapted to slide into suitable vertical guides provided in the flanges 2 of the bottom member 1 and on the inner sides respectively of the side members 3. The guides in the bottom member may be formed as follows:—In each of the flanges 2 to which a member 3 is hinged, there is punched inwardly a right-angled tongue 16, see Fig. 8, which is adapted to be slidably engaged by the adjacent flange 15 of the partition 14. Below and a little at one side of the tongue 16 there is punched inwardly from the flange 2 a straight tongue 17, which is adapted to slidably engage the side of the partition 4 opposite the said flange 15.

Each of the side members 3 adjacent to its upper edge is provided with an inwardly extending right-angled tongue 18, similar to the tongue 16, and below and at one side of the tongue 18 is an inwardly extending straight tongue 19, similar to the tongue 17.

When the side members 3 are in the upright position, shown in Figs. 5 and 6, the tongues 18 and 19 will be respectively in vertical alinement with the tongues 16 and 17, so that the flanges 15 of the partition 14 may be slid downwardly into locked engagement with the tongues 18 and 16, the opposite side of the partition 14 being slidably engaged with the tongue 17 and 19.

The partition 14, in addition to its function of dividing the crate into two compartments, also serves as a brace. Being extended into the box-shaped bottom member 1, it is securely held thereby, and thus holds the side members 3 against any tendency to swing in either direction from the upright position.

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 having two end flanges provided each with two holes therethrough closely adjacent to each other, side members hinged to said bottom member so as to be swung from an upright to a collapsed position, two opposite side members being hinged respectively to said flanges and provided each with two holes therethrough, releasable means for locking the side members in the upright position, and a cover provided with two end flanges adapted to embrace the flanges of the bottom member and the two adjacent side members, each end flange of the cover having two holes therethrough adapted to register respectively with the holes in the adjacent side member when the latter is in the upright position, and adapted to register respectively with the holes in the adjacent end flange of the bottom member when the latter is embraced by the cover, whereby a short flexible securing device may be inserted through each set of holes which are in register with each other for securing the cover to the side members or to the bottom member.

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."