

May 25, 1943.

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2,319,924

COMPLETE STICKLESS STAPLELESS CHICK BOX

Original Filed March 13, 1940

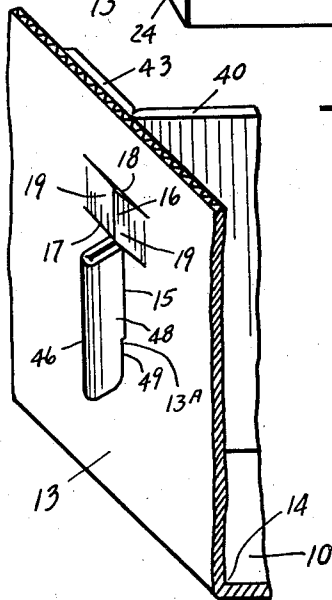
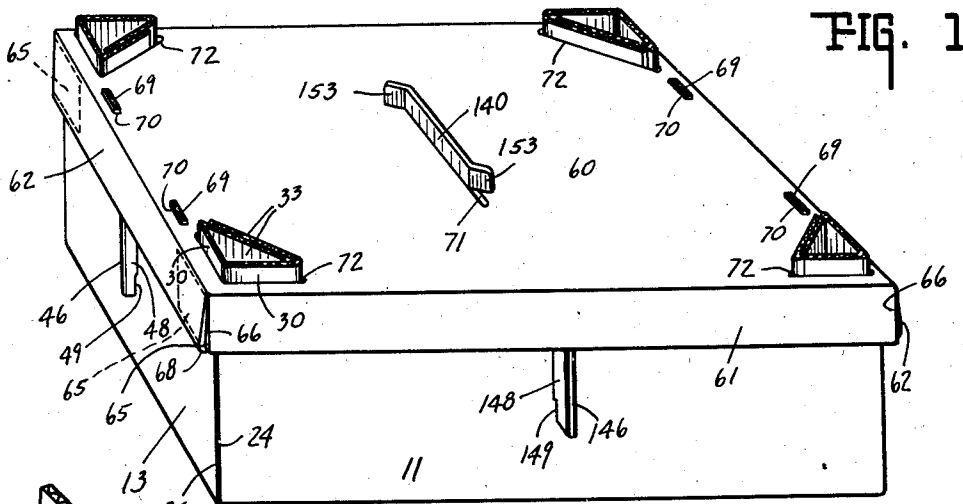


FIG. 2

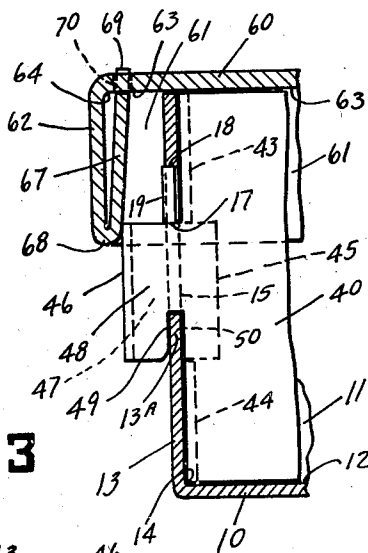


FIG. 3

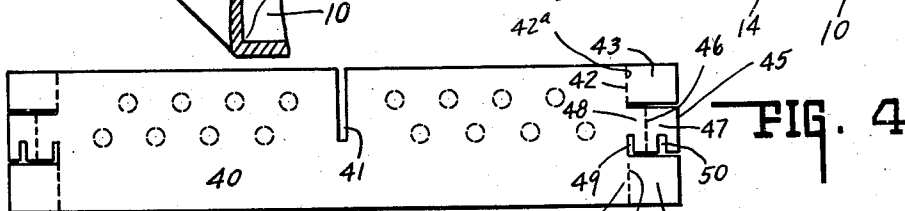


FIG. 4

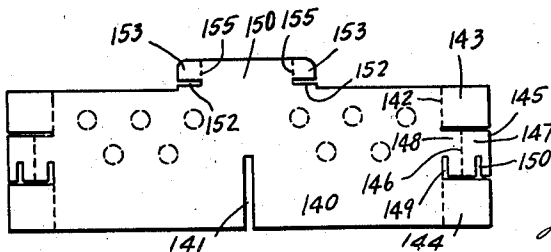


FIG. 5

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COMPLETE STICKLESS STAPLELESS CHICK BOX

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Original application March 13, 1940, Serial No.
329,438. Divided and this application October
22, 1941, Serial No. 415,993

10 Claims. (Cl. 229—15)

This invention relates to a chick box which may be made of any suitable paper board material, but as is now common in the industry, corrugated paper board is preferred.

The chief object of this invention is to provide a chick box and the like with a partition structure that is secured in and to a chick box without stitching or stapling, etc., and which partition is held in proper position.

A supplementary object of the invention is to provide a cover of like character, that is, erected without stitching or stapling and so associated with the projecting ends of the partition that the cover lock is retained in locking relation when the cover is applied to the box.

The chief feature of the invention consists in forming a chick box with a cover and partition of the aforesaid character and which when stacked side-by-side provide an air-space therebetween for ventilation purposes.

Other objects and features of the invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawing, the following description and claims:

In the drawing, Fig. 1 is a perspective view of a chick box embodying the invention.

Fig. 2 is a perspective view of a portion of the box-partition interlock arrangement.

Fig. 3 is a vertical sectional view of the same.

Fig. 4 is a developed plan view of one of the intersecting partitions.

Fig. 5 is a similar view of the other of the intersecting partitions.

In Fig. 1 of the drawing there is illustrated in perspective a complete chick box structure. As shown in Figs. 2 and 3, this box structure includes a bottom 10 and, as shown in Fig. 1, there is a side wall 11 and said wall is connected thereto by the scoring or crease 12. There is also provided an end wall 13 connected by the scoring or crease 14 to bottom 10.

Medianly of each wall in the present instance, there is provided a vertical slot 15 that extends through the wall. Extending upwardly therefrom is a median slit 16. Extending laterally of the top of the slot and the bottom of the slit and in opposite directions is the slit 17. Extending parallel thereto and at the upper end of the slit 16 is a similar slit 18. This is shown most clearly in Fig. 2. This forms an H-shaped slit arrangement and provides two wings 19 for partition mounting and anchorage.

Each of the four walls 11 and 13 is provided with a similar combination slot and slit arrangement, only two of which, however, are illustrated in Fig. 1.

The vertical side edges of the side and end walls are secured together by any suitable arrangement, one such arrangement being that

disclosed in the copending application, Serial No. 329,438, filed April 13, 1940 and entitled "Complete stickless stapleless chick box," of which this application is a division.

5 The corner edge between the side and end walls is indicated by the numeral 24 in Fig. 1. The connection, however, need not be of the character specified in the aforesaid application. As shown in the drawing, the walls when erected stand perpendicular to the body portion.

10 In the present form of the invention there is provided a cover 60, see Fig. 1, which on two opposite sides is provided with two rim-forming side portions 61 and on the two intermediate sides is provided with two intermediate rim-forming side portions 62, the portions being hingedly connected to the top 60 by the crease arrangements 63 and 64 respectively. Each of the rim-forming portions 61 includes flap extensions 65 at its side edges, the same being connected thereto by the hinged scores 66. The rim-forming portions 62 have hingedly connected thereto the portions 67, see Fig. 3, and by the creased scorings 68. Each of these portions 67 includes a plurality of spaced projecting tongues 69, see Figs. 1 and 2, and the top portion 60 adjacent thereto is correspondingly slotted at 70 for tongue seating.

25 The cover is provided with an elongated slot 71 for a purpose hereinafter set forth if, as and when desired, and triangular openings adjacent the corners and designated by the numeral 72. These are adapted to receive the upwardly extending triangular tubular formations 30 positioned in the corners between the side and end walls of the box.

35 The upper edges 33 of this triangular tubular extension serve as bearing or spacing element for a superposed box thereby providing an air space between the bottom of a superposed box and the top or cover 60. If the cover is apertured as is customary in chick boxes, ventilation into the lower box is obtained through the aforesaid apertures. Since these apertures are quite conventional in the chick box art and are formed by die-cutting incomplete circular representations and these are about $\frac{1}{2}$ " in diameter and the material so defined may be readily removed by finger pressure applied to the die-cut defined area, and all the aforesaid is conventional, for simplicity, illustration of such construction is intentionally omitted.

40 In like manner, the side and end walls may be similarly provided with readily removable ventilating portions.

45 As shown in the copending application, the triangular tubular portions 30—33 are secured in the corner of the chick box and project through the cover. The triangular representations exposed by the cover when seated, however, may be formed rigid with the cover when corner block-

ing of the box bottom is not desired. The aforesaid form of cover structure is shown in the patent to Schaefer, No. 2,229,603 issued January 21, 1941.

Reference will now be had more particularly to Fig. 4 wherein there is illustrated the simplest form of partition. Herein, the numeral 40 indicates the body portion of the partition provided with a central slot 41 which is shown directed downwardly and positioned medianly. The end of the partition proper is indicated by the numeral 42.

There are two flaps, however, 43 and 44 at each end and these are connected by hinge scores 42a to the body portion 40. The portion intermediate the two extensions 43 and 44 is indicated generally by the numeral 45, and is connected to portion 40 in alignment with the hinge crease 42a and includes a parallel, multiple crease 46 forming two portions 47 and 48. To permit portion 47 to be returned and lie adjacent portion 48 and parallel thereto, portion 48 adjacent and in alignment with the crease 42a is slotted or notched as at 49 and portion 47 also is slotted or notched as at 50. When portion 47 is lapped with reference to portion 48, the two notches or slots 49 and 50 register and form a notch for seating the portion of the wall 13 indicated by the numeral 13A in Fig. 3.

In Fig. 5, numerals of the 100 series similar to numerals of the primary series utilized in Fig. 4 indicate like or similar parts.

Herein, the partition 140 has the median slot 141 extending upwardly from the bottom. This slot is reversed in position with respect to the partition 40 so that the two partitions 40 and 140 may be interfitted in the wellknown manner common to intersecting partition structures for chick boxes.

The partition 140 includes an upward extension 150 which is slit as at 152 to form tongues, each end of said tongues being indicated by the numeral 153. These tongue portions may be bent angularly of the body portion 151 and serve for cover locking purposes when portion 151 is projected through the registering slot 71 shown in Fig. 1 and in the cover structure 60.

When the box is erected the two portions 40 and 140 are associated together in rectangular relationship and positioned above the bottom 10. The one pair of parallel walls 13 is erected and in the erection the return bend portion 47-48 passes through the slot 15 and, at the same time, forces outwardly the adjacent wings 19, see Fig. 2 more particularly, although Fig. 3 illustrates the same.

When the walls are perpendicular, the portions 43 and 44 having been bent angularly to the partition proper in this operation, the partition may be dropped so that its lower end engages the base or bottom 10.

When that occurs, it will be noted that the portion of the wall 13A below the slot 15 seats in the registering notches 49-50, see Figs. 2 and 3, thus positively locking this partition in place. At the same time, the two wings or extensions 43 and 44 of the partition lie parallel to and bear upon the aforesaid wall 13. Thereafter, slight finger pressure on the two outwardly directed wings 19 will be sufficient to return them to substantially coplanar relationship with the wing including wall, as shown in Figs. 2 and 3.

The partition 140 is similarly mounted. Whenever walls 11 and 13 are rigidly secured together and not secured together in the manner broadly

illustrated in the copending application, the partition 40 having the upwardly directed median slot 41 is first mounted in the chick box bottom structure as aforesaid by slightly bowing the partition to facilitate end anchorage and manipulation of the partition. Then the partition 140 is associated in intersecting relation with the partition 40 at the notches 49-50 and the partition between said intersection and the ends is slightly bowed sufficient to anchor the ends shown in Fig. 5 in a similar manner to the walls 11 of the box as shown in Fig. 1.

The result is that the partition is rigidly anchored and locked by the interlocking relation and all without the use of staples, stitching or the like.

Whenever it is not desired to utilize the cover lock shown in Figs. 1 and 5, the top edge of the partition 141 may be continuous and the tongue portion 151 may be omitted. In that event the slot 71 will be omitted in the cover.

It will, of course, be apparent that if desired another slot 71 may be provided in the cover at right angles to the slot shown in said cover and in that event the partition 40 would have an upwardly directed median projection, the free ends of which would be formed similar to the ends 153, it, of course, being understood that the slot 41 would be continued through the projecting portion so provided on partition 40.

As shown clearly in Fig. 3, the upper edge of the return bend portion 47-48 of the partitions is at an elevation above that of the lower edge 68 of the rim 62-67, so that the rim insofar as the multiple thickness end thereof is concerned, is constrained toward locked relation by the exteriorly projecting portions 47-48 of the partition. This projecting portion serves to retain the tongues 69 in the slot 70 and thus hold the cover in cover forming relation, it being understood that the flaps 65 are nested between the portions 62 and 67.

Projections 47-48 and 147-148 on the four sides constitute spacers between boxes when stacked side by side and inside ventilation through the side and end wall ventilating apertures.

While the invention has been illustrated and described in great detail in the foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein, as well as others which will readily suggest themselves to persons skilled in this art, are all considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch.

2. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking connection

between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, the partition end extension being folded upon itself and projecting inwardly into the box, the folded portion being similarly slotted.

3. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, the wing arrangement including an I-shape slit, the midportion of which is in longitudinal alignment with the wall slot, and forming above the slot a pair of wings for partition folded extension reception and locking.

4. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, the partition end extension being folded upon itself and projecting inwardly into the box, the folded portion being similarly slotted, the wing arrangement including an I-shape slit, the midportion of which is in longitudinal alignment with the wall slot, and forming above the slot a pair of wings for partition folded extension reception and locking.

5. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking and stabilizing connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, and laterally directed flap means on the end of each partition and lying adjacent and in contact with the adjacent interior face of the adjacent wall.

6. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking and stabilizing connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the

partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, and laterally directed flap means on the end of each partition and lying adjacent and in contact with the adjacent interior face of the adjacent wall, and positioned at the bottom of the partition for box bottom engagement for partition stabilization.

7. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking and stabilizing connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, and laterally directed flap means on the end of each partition and lying adjacent and in contact with the adjacent interior face of the adjacent wall, the flap means at each end including flaps above and below the end extension portion.

8. In a chick box having spaced pairs of transverse walls, the combination of a pair of intersecting, opposed slot, interlocking connected partitions of a length substantially that of the walls parallel thereto, and an interlocking and stabilizing connection between each wall and adjacent end of the partition, the wall including an elongated slot and a wing arrangement closed extension at its upper end, the adjacent end of the partition including an extension, the extension including a notch for wall reception and partition locking, the wing arrangement for the slot extension having a depth at least equal to the depth of the notch, and laterally directed flap means on the end of each partition and lying adjacent and in contact with the adjacent interior face of the adjacent wall, the flap means at each end including flaps above and below the end extension portion, each lower flap having its lower edge engaging the box bottom for partition stabilization.

9. A partition and wall lock including a wall having a slot therein and a wing arrangement closure extension thereof, and a partition having a wall protruding extension seatable in the slot and of a depth not greater than that of the slot and wing arrangement in summation and having a notch in its lower edge of a depth approximately that of the wing arrangement for wall seating.

10. A partition and wall lock including a wall having a slot therein and a wing arrangement closure extension thereof, and a partition having a wall protruding extension seatable in the slot and of a depth not greater than that of the slot and wing arrangement in summation and having a notch in its lower edge of a depth approximately that of the wing arrangement for wall seating, the extension including a portion folded upon itself and projecting through the wall and including a registering notch, the wing arrangement including a pair of oppositely hinged wings, the parting therebetween being in alignment with the wall slot.

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