June 30, 1942. H. M. INMAN 2,288,457

POULTRY BOX

Filed Oct. 17, 1940 4 Sheets-Sheet 1

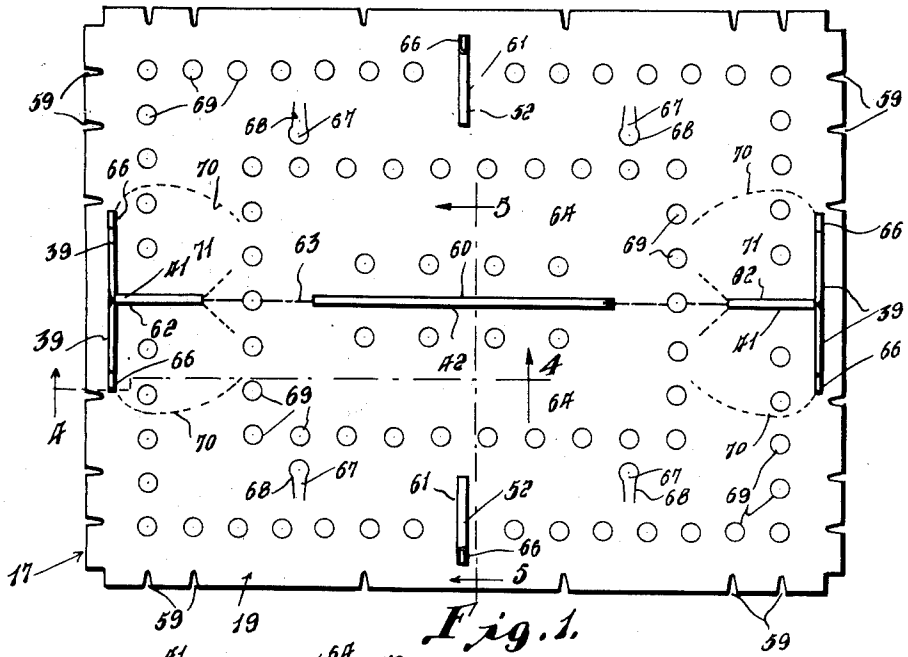


Fig. 1.

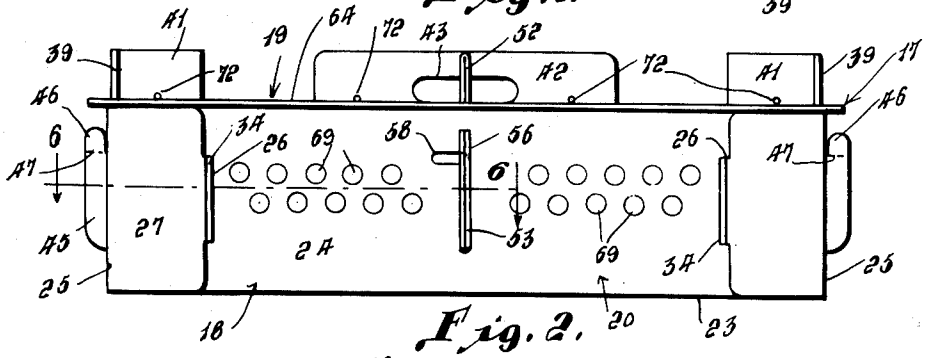


Fig. 2.

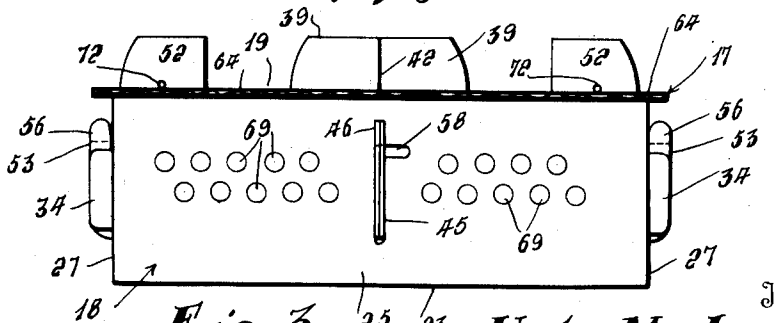


Fig. 3.

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POULTRY BOX

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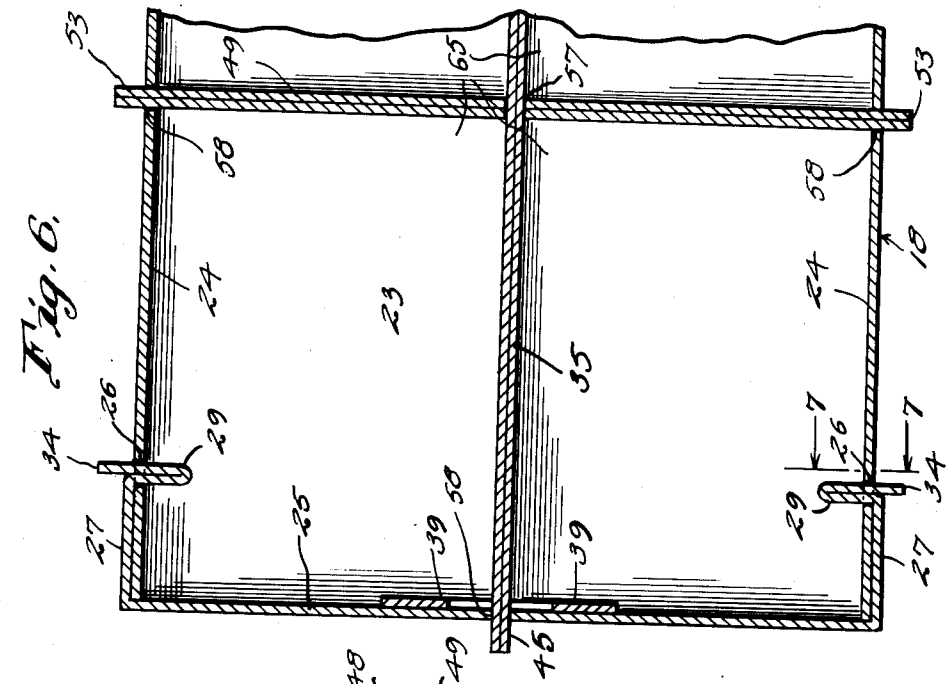


Fig. 6.

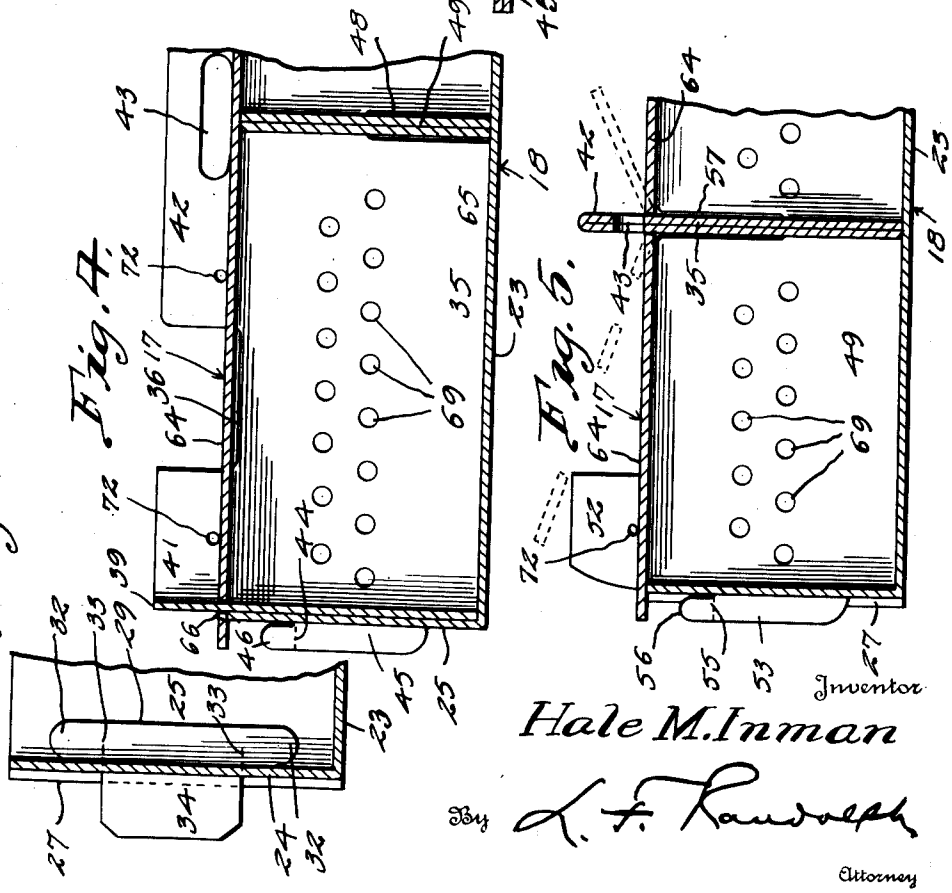


Fig. 4.

Fig. 5.

Fig. 7.

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POULTRY BOX

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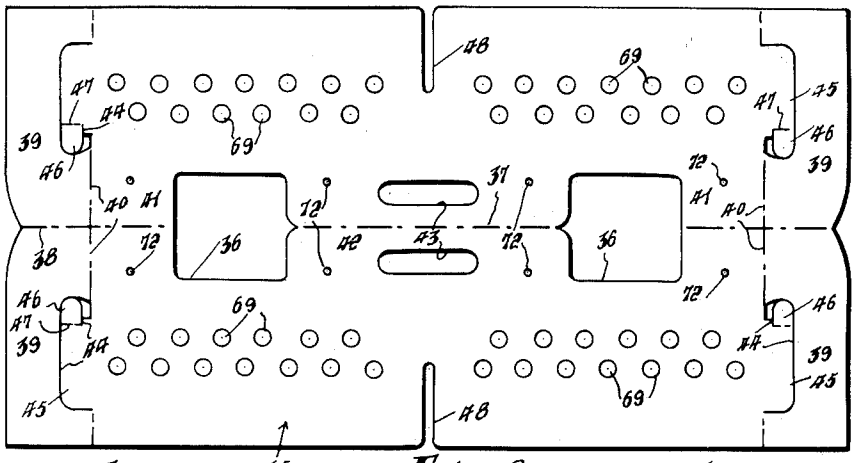


Fig. 9.

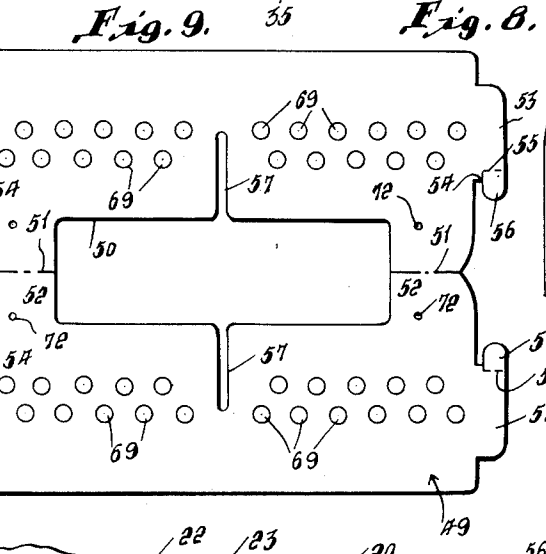


Fig. 8.

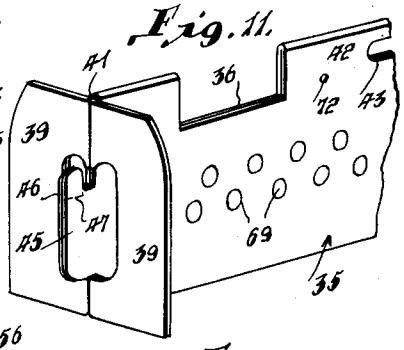


Fig. 11.

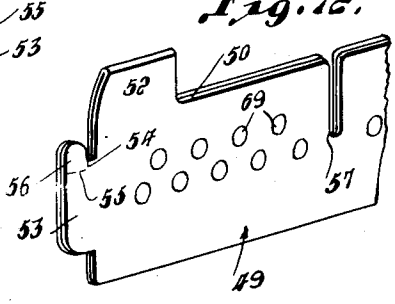


Fig. 12.

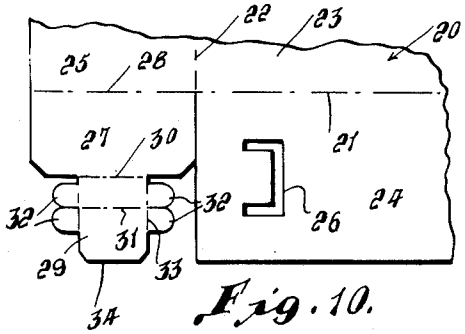


Fig. 10.

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POULTRY BOX

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Fig. 13.

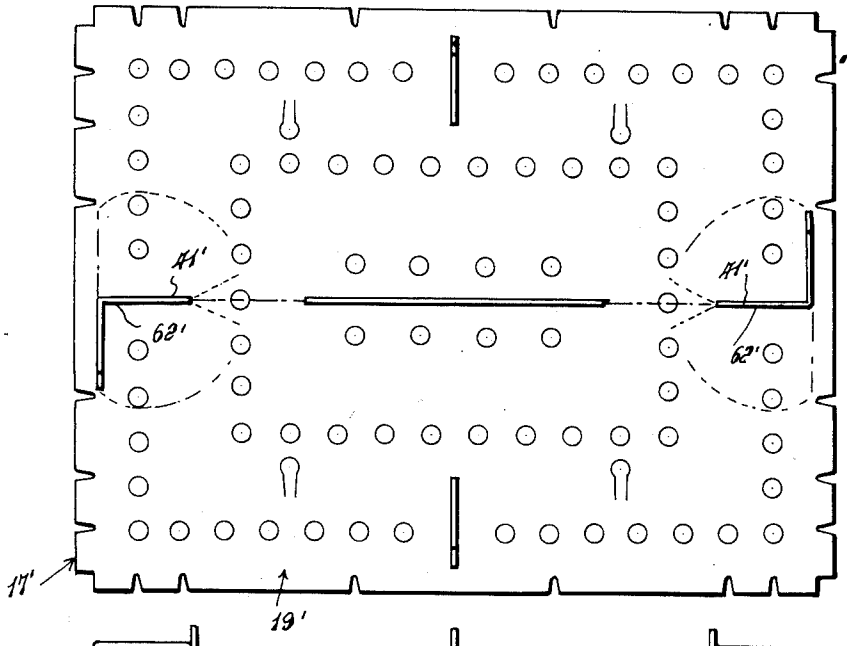


Fig. 14.

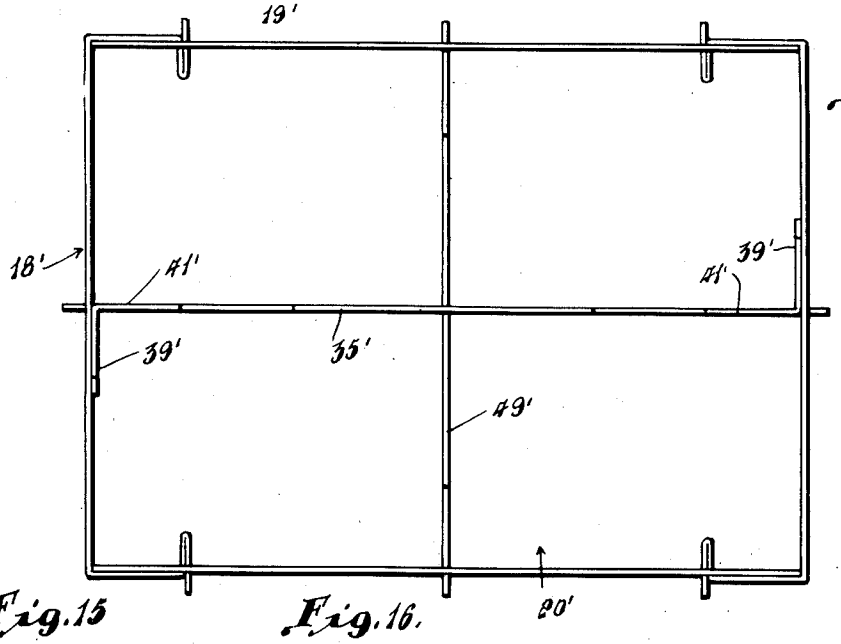


Fig. 15

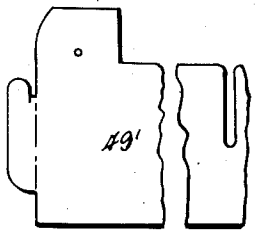
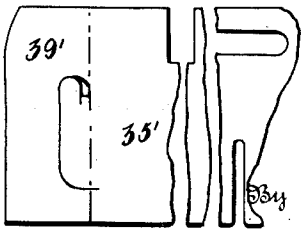


Fig. 16.



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2,288,457

UNITED STATES PATENT OFFICE

2,288,457

POULTRY BOX

Hale M. Inman, Aberdeen, S. Dak.

Application October 17, 1940, Serial No. 361,628

12 Claims. (Cl. 229—6)

This invention relates to an improved construction of poultry box, and more particularly to a box for use in shipping chicks, turkey poults and ducklings, and which is formed by blanks of fibrous material which may be readily assembled for use without the use of staples or other separate fastening means.

One object of the invention is to provide a poultry box of fibrous material provided with vent openings and means for spacing the sides and lid of the box from adjacent boxes to permit free circulation of air in and around the box at all times.

Another aim of the invention is to provide a poultry box having a lid adapted to fold along a central line so that corresponding portions of the lid may be opened independently of one another for exposing portions of the box; said lid also being provided with integral flaps adapted to be opened for inserting chicks into different compartments of the box.

Still a further aim of the invention is to provide a box having longitudinal and transverse partitions, which partitions are provided with upwardly projecting spaced portions which extend through the lid of the box for spacing the boxes when stacked, one of said extending portions being provided with a slot and being disposed substantially in the center of the box to form a handle by means of which the box may be carried.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, which illustrate preferred embodiments of the invention, and wherein:

Figure 1 is a top plan view of one embodiment of the poultry box, showing the lid applied and in a closed position,

Figure 2 is a side elevational view of the same,

Figure 3 is an end view in elevation of the same,

Figure 4 is an enlarged longitudinal vertical sectional view taken substantially along the plane of the line 4—4 of Figure 1,

Figure 5 is an enlarged transverse vertical sectional view taken substantially along the plane of the line 5—5 of Figure 1, and showing the sections of the lid, in dotted lines, in partially opened positions,

Figure 6 is an enlarged horizontal sectional view taken substantially along the plane of the line 6—6 of Figure 2,

Figure 7 is an enlarged detail vertical sectional view taken substantially along the plane of the line 7—7 of Figure 6,

Figure 8 is a plan view of the blank from which the longitudinal partition of the poultry box is formed,

Figure 9 is a similar view of the blank from which the transverse partition is formed,

Figure 10 is a fragmentary plan view of one corner of the body portion of the box,

Figure 11 is a perspective view of one end of the longitudinal partition, shown detached from the body portion of the box and assembled ready to be applied,

Figure 12 is a similar view of one end of the transverse partition,

Figure 13 is a top plan view of another embodiment of the poultry box, shown provided with single ply partitions,

Figure 14 is a top plan view of the box, shown in Figure 13, with the lid thereof removed,

Figure 15 is a fragmentary side elevational view of one end of the transverse partition of the box shown in Figures 13 and 14, and

Figure 16 is a similar view of one end of the longitudinal partition of said box.

Referring more particularly to the drawings, wherein like reference characters designate like or corresponding parts throughout the different views, 17 designates generally one embodiment of the poultry box, as illustrated in Figures 1 to 12, which includes a box, designated generally 18 and a lid, designated generally 19.

The box 18 includes a body portion 20 which is formed from a single blank and which, as best seen in Figures 6 and 10 is adapted to be folded along the lines 21 and 22 to form the bottom 23, side walls 24, and end walls 25. The side walls 24 are provided adjacent their ends with U-shaped slots 26, the legs of which extend toward the ends of the walls 24 adjacent which the slots 26 are disposed. The end walls 25 are provided with extensions 27, at their ends, which are adapted to be folded along the lines 28 and which are provided at their free ends with integral tongue members 29 which are adapted to be folded relatively to the extensions 27 along the lines 30. The tongue members 29 are of double thickness and are adapted to be folded upon themselves along the lines 31 and are provided at their ends or top and bottom edges with tabs 32 which are adapted to be folded along the lines 33.

To assemble the body portion 20 the side and end walls 24 and 25 are bent upwardly relatively to the bottom 23, along the lines 21 and 22, respectively. The extensions 27 are folded along the lines 28 to be disposed on the outer sides of

the ends of the side walls 24, after which the tongue members 29 are folded on the lines 31 to form tongue members of two thicknesses. These tongue members are then folded on the lines 30 to extend inwardly and their tabs 32 are folded on the lines 33 to project toward the extensions 27, of which the tongue members 29 form a part, so that the tongue member 29 can be passed through the adjacent slot 26, after which the tabs 32 are bent back to their original positions to form extensions of the body portions of the tongue members 29 for locking said members in the slots 26, as best seen in Figure 7. The tongue members 29 are provided with integral fin portions 34 which project outwardly through the slots 26 and beyond the side walls 24 for a purpose which will hereinafter become apparent.

Referring particularly to Figures 8 and 11, 35 designates generally a longitudinal partition which is formed from a blank of fibrous material and which is provided with spaced, substantially square cut-out portions 36 and a longitudinal fold line 37 along which the blank forming the partition 35 is adapted to be folded to form a partition of two thicknesses. The ends of the blank are cut along the lines 38 to form the flanges 39 which are folded outwardly along the lines 40 and which combine with the cut-out portions 36 to form the upwardly projecting end extensions 41, which include portions of the flanges 39 and the intermediate upwardly projecting extensions 42, the plies of which are cut-out to form a longitudinal slot 43, for a purpose which will hereinafter become apparent. The flanges 39 are cut along the lines 44 to form portions which project from the flanges 39, at right angles thereto, and which form extensions of the ends of the partition 35, said portions being disposed in abutting engagement, at each end of the partition 35, to form tongues 45, each having a tab at its upper end, designated 46, which is adapted to be folded on a line 47. The blank forming the partition 35 is provided with transverse slots which open outwardly of the side edges thereof and which combine, when the blank is folded to form the partition, to form a downwardly opening slot 48 in the partition 35, intermediate of the ends thereof.

As best seen in Figures 9 and 12, the transverse partition, designated generally 49, is likewise formed from a single blank of fibrous material which is provided with a longitudinally and centrally disposed cut-out portion 50 and with fold lines 51 beyond the ends of the cut-out portion and on which the blank is adapted to be folded lengthwise to form a two ply transverse partition 49, as best seen in Figure 12. The cut-out portion 50 forms the upwardly projecting extensions 52 at the ends of the partition 49. The ends of the plies of the partition 49 are provided with complementary extensions forming tongues 53 which are cut along the lines 54 and provided with the fold lines 55 forming tabs 56 at the upper ends of the tongues 53. The blank forming the partition 49, is provided with transverse slots which open into the cut-out portion 50 intermediate of the ends thereof, and which form the upwardly opening slot 57 in the partition 49, as illustrated in Figure 12.

The side and end walls 24 and 25, respectively, are provided with inverted L-shaped slots 58, intermediate of their ends. To assemble the box 18, the partition 49 is first inserted into the box transversely thereof, preferably before the sides 24 and 25 are interlocked by the tongue members 29. The tabs 56 of the tongues 53 are folded to horizontal positions on the lines 55 so that the tongues can be passed through the slots 58 in the side walls 24 after which the tabs are bent backward to their original positions to extend upwardly, as seen in Figure 2, for locking the partition 49 in position. The longitudinal partition 35 is then inserted into the body portion 20 with its slot 48 interengaged with the slot 57, as best seen in Figures 4 and 5, for connecting the partitions 35 and 49 in crossed relationship, as illustrated in Figure 6. The tabs 46 of the tongues 45 are then folded and passed through the slots 58 of the walls 25 and thereafter returned to their original, upright positions, for interlocking the partition 35 to the end walls 25. When thus disposed, the flanges 39 will be in abutting engagement with the inner sides of the end walls 25, as seen in Figure 6. Walls 24 and 25 are then interlocked by means of the tongue members 29 to complete the assembled box 18, as shown in Figure 6. With the box thus assembled, the extensions 41, 42 and 52 project above the level of the upper edges of the walls 24 and 25, as illustrated in Figures 2 and 3.

A lid 19, as best seen in Figure 1, is formed from a single thickness of fibrous material which is provided with a longitudinal slot 60, at the center thereof, spaced transversely disposed slots 61, and T-shaped slots 62, adjacent the ends of the lid 19. The lid 19 is adapted to be applied over the open top of the box 18 for closing the same, and when in a closed, applied position, as illustrated in Figures 2 and 3, the extensions 42 will project upwardly through the slot 60, the extensions 52 will extend upwardly through the slots 61 and the extensions 41 will extend upwardly through the slots 62. The lid 19 is sized so that it will extend substantially beyond the side and end walls 24 and 25, as seen in Figures 2 and 3, and is provided with notches 59 in its marginal portions which extend inwardly to the sides 24 and 25, for a purpose which will hereinafter be explained. The lid 19 is provided with the longitudinally disposed fold lines 63 dividing the lid into corresponding longitudinal sections 64 which are hingedly mounted relatively to one another so that either of the sections 64 may be swung upwardly, independently of the other, as illustrated in Figure 5, for exposing two of the four compartments 65, of the box 18. In this way, either half of the box 18 may be opened without removing the lid 19. The ends 66, as seen in Figure 1, of the extensions 41 and 52 are rounded to permit the sections 64 to be swung upwardly. The lid sections 64 are provided with struck-out portions 67 forming keyhole shaped openings 68. The portions 67, of one of the sections 64, are adapted to engage the keyhole shaped openings 68 of the other section 64, when both of the sections are in fully opened positions, for detachably holding the sections in open positions.

The side walls 24, end walls 25, partitions 35 and 49, and lid 19 are each provided with a plurality of circular scored portions 69 which are adapted to be punched out to form ventilating openings by means of which the amount of ventilation provided may be varied, depending upon the temperature by punching out a few or many of said portions 69. The lid 19 is scored along the lines 70 to form flaps 71 which are adapted to be swung upwardly for exposing the individual compartments 65 so that baby chicks, for example, may be placed in the different com-

partments 65 by only exposing a portion of one of the compartments. The scored portions 69, formed in the flaps 71, may be punched out to form finger holes for raising the flaps. The extensions 41, 42 and 52 are provided with apertures 72 through which can be threaded a strand of wire, not shown, for retaining the lid 19 in a closed position on the box 18.

From the foregoing it will be obvious that a number of chicks, for example, can be contained in the poultry box 18 and may be inserted into or removed from the compartments 65 without removing the lid 19 by merely swinging the sections 64 to raised positions. The chicks may also be inserted through the openings formed by the flaps 71, as previously explained. In addition to retaining the lid 19 in a closed position by means of the strand of wire threaded through the apertures 72, the box 18 may be tied up tightly with cord or twine, for example, not shown, and the notches 59 are provided for anchoring the cord or twine and for preventing it from causing the lid 19 to buckle. The extensions 41, 42 and 52 will support a superposed box in spaced apart relationship to the lid 19 to permit a free circulation of air thereover and through the openings formed by the portions 69 thereof. The marginal portion of the lid 19 which extends beyond the walls 24 and 25, the tongues 45 and 53, and the fins 34 combine to form spacing means to prevent adjacently stored boxes from engaging against the walls 24 and 25 to thereby insure a free circulation of air around the box and through the ventilating openings formed in the walls 24 and 25 thereof. The slot 43 in the extensions 42 forms therewith a handle by means of which the box 18 may be manually carried.

Referring to Figures 13 to 16, 17' designates generally a slightly modified form of poultry box including a box portion 18', the body portion 20' of which is identical with the body portion 20. The partition 35' is formed of a single ply and is identical in shape with the partition 35 except that it is provided with a single flange 39' at each end thereof, which flanges extend in opposite directions, relatively to one another. As a result, the extensions 41' are L-shaped whereas the extensions 41 are T-shaped. The partition 49' is identical with the partition 49 except that it is formed of a single ply or thickness which, however, does not effect its shape or construction.

The lid 19' corresponds with the lid 19 except that its slots 62' are L-shaped to receive the extensions 41' whereas the slots 62 are T-shaped. The L-shaped slots 62' have their transversely disposed sides extending in opposite directions. The remaining parts of the poultry box 17' are identical with the corresponding parts of the poultry box 17 and will therefore not be described.

In view of the previous description of the poultry box 17 and in view of the fact that the purpose of the box 17' and the function of its parts are the same, a further description of the poultry box 17' is deemed unnecessary.

Various modifications and changes in the construction and arrangement of the parts forming the invention are contemplated and may obviously be resorted to as only preferred embodiments thereof have been disclosed.

I claim as my invention:

1. A chick box comprising a body portion of cardboard or the like, a longitudinal and a transverse partition disposed in the body portion and dividing it into compartments, the side and end walls of said body portion being provided with slots, tongues formed at the ends of said partitions for engaging said slots, locking means associated with the tongues for retaining them in position in the slots, all portions of the upper edges of the side and end walls being disposed at substantially the same level, a substantially flat cover for the body portion, said cover being disposed to rest on the upper edges of the side and end walls, when in a closed position, said cover having a plurality of slots, said partitions having a plurality of upwardly projecting enlargements extending through the slots, and said cover having a fold line to permit either side of the cover to be swung upwardly into an open position for exposing certain of the compartments.

2. A chick box as in claim 1, one of said upwardly extending portions being disposed substantially in the center of the box and being provided with a slot to form a handle and a central support for the bottom of a superposed box.

3. A chick box as in claim 1, said cover being provided with means, forming a part thereof, for connecting complementary portions of the cover for holding said portions in a raised, open position relatively to the compartments.

4. A poultry box having side and end walls provided with angular slots, a longitudinal and a transverse partition disposed in and dividing the box into a plurality of compartments, said partitions having tongues for engaging complementary legs of the slots for connecting the partitions to the walls, said tongues being provided with locking tabs at corresponding ends thereof, said tabs each being bent at an angle to its tongue to be passed through the other leg of the slot, which is engaged by its tongue, and said tabs tending to assume their normal positions in alinement with their tongues, when released, so that said tabs will be out of alinement with the last mentioned legs of the slots, for locking the tongues therein, said partitions having spaced upwardly projecting portions extending above the upper edges of the walls, and a lid for covering the open top of the box having slots for engaging the upwardly projecting portions, said lid having a longitudinal fold line whereby portions of the lid can be independently swung upwardly to an open position.

5. A poultry box as in claim 4, the edges of said lid extending beyond the side and end walls and being provided with a plurality of spaced notches extending inwardly to the side and end walls for receiving and anchoring a flexible member for tying the lid on the box.

6. A poultry box as in claim 4, comprising means formed integral with the lid for connecting said portions thereof for holding the lid portions in open positions.

7. A poultry box as in claim 4, said lid being provided with integral, hinged flaps forming openings communicating with the different compartments of the box.

8. A poultry box as in claim 4, the side walls of the box, adjacent their ends, being provided with U-shaped slots, the end walls of the box being provided with extensions at their ends, said extensions having integral tongues, said tongues being of double thickness and being provided with tabs at their ends adapted to be bent for passing through the U-shaped slots, said tabs being adapted to return to their normal positions, in alinement with their tongues, and out of aline-

ment with the slots, when released, for locking the last mentioned tongues in the U-shaped slots, and the free ends of said last mentioned tongues having portions projecting outwardly of said U-shaped slots.

9. A poultry box as in claim 4, said partitions being of double thickness and being folded along their upper edges, said longitudinal partition being provided with oppositely extending flange portions at its ends, disposed against the inner sides of the end walls, and the tongues of the longitudinal partition being cut out of said flanges.

10. A poultry box as in claim 4, said partitions each being of single ply and being interconnected intermediate of their ends, the ends of the longitudinal partition being bent to extend in opposite directions and being disposed against the inner sides of the end walls, and the tongues of the longitudinal partition being cut out of said ends.

11. A poultry box having side and end walls, a longitudinal and a transverse partition dividing the box into compartments, a lid, provided with a plurality of slots, for covering the open top of the box, said partitions having upwardly extending portions projecting through the slots for connecting the lid and box, said lid having a central fold line whereby corresponding portions of the lid are hingedly mounted relatively to one another for exposing the different compartments without removing the lid, and said lid having hinged flap portions adapted to be opened relatively to the lid for exposing portions of the compartments.

12. A poultry box of fibrous material, said box having tongues and slots for detachably connecting portions thereof, said slots each including angularly disposed portions, said tongues each having a tab at an end thereof, each tongue being detachably engaged with one portion of its slot, its tab being bent at an angle to the tongue to be passed through the other portion of the slot, and said tabs tending to return to their normal positions, in alinement with their tongues and out of alinement with the slot portions, through which they are passed, when released, for locking the tongues in the slots.

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