June 15, 1937. A. B. THORUP 2,083,623

BOX FOR SHIPPING CHICKS

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Fig. 1

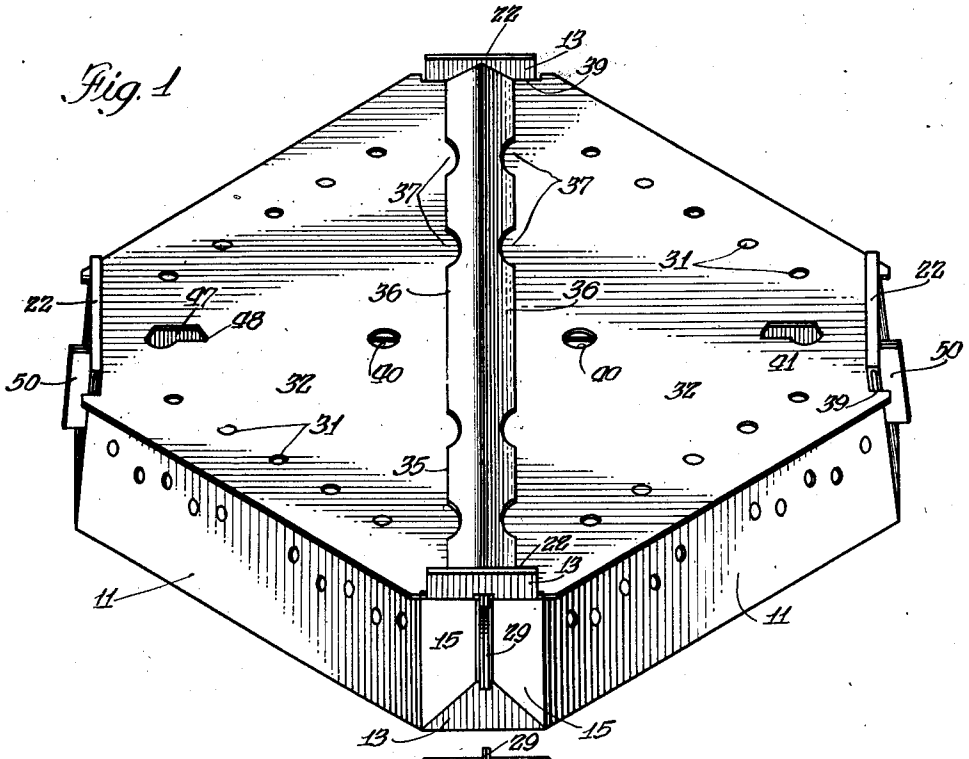


Fig. 2

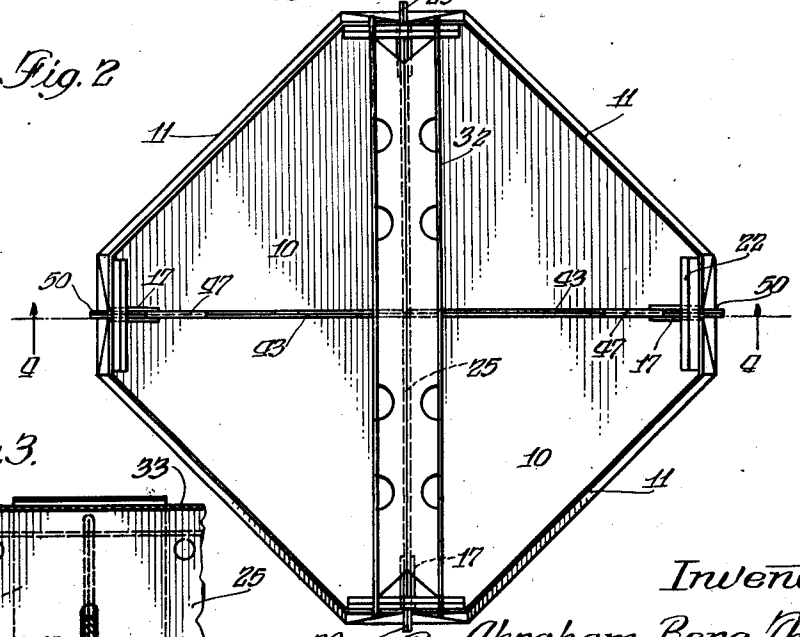
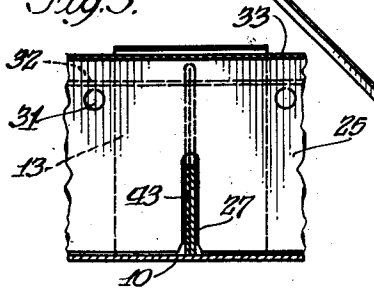


Fig. 3.



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Fig. 4

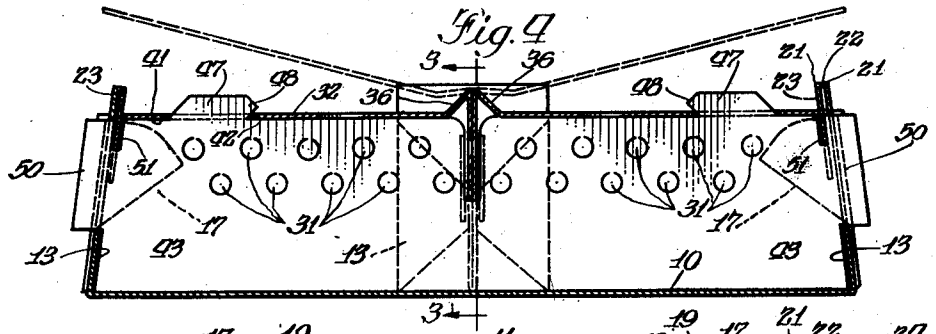
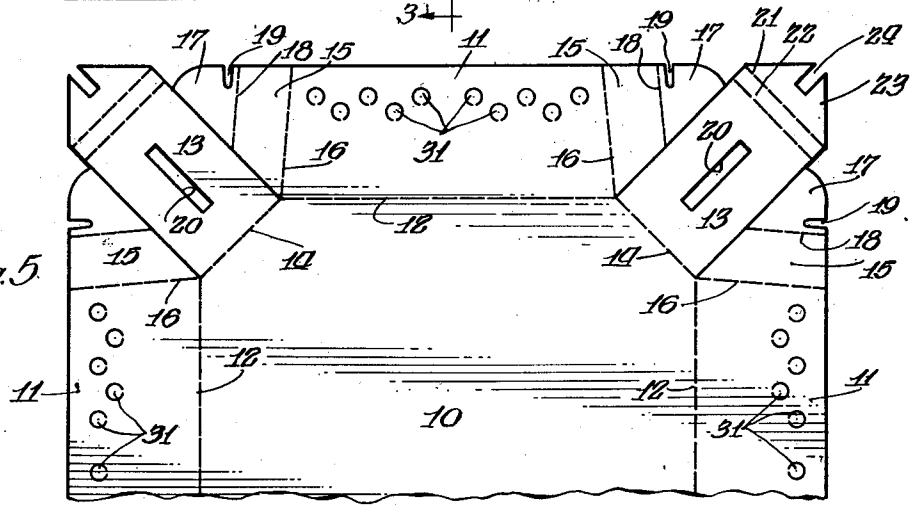


Fig. 5



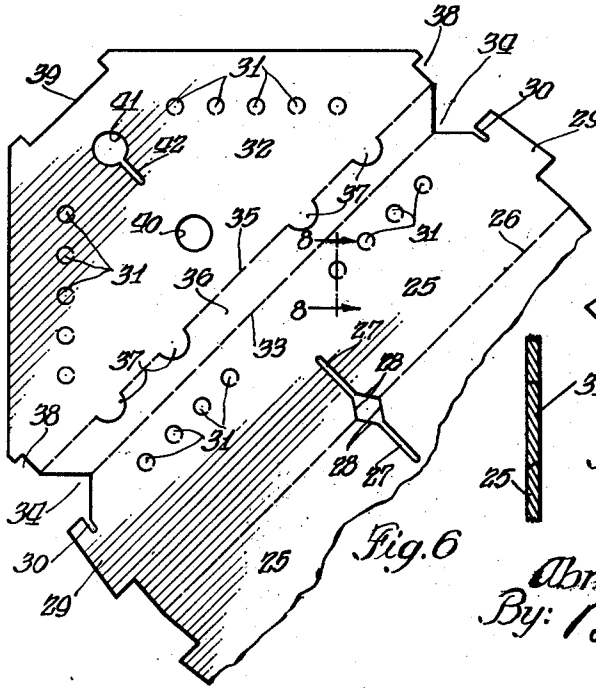


Fig. 6

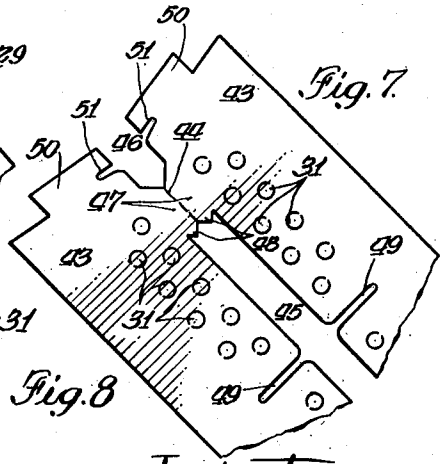


Fig. 7

Fig. 8

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UNITED STATES PATENT OFFICE

2,083,623

BOX FOR SHIPPING CHICKS

Abraham Berg Thorup, Salt Lake City, Utah

Application July 3, 1935, Serial No. 29,579

9 Claims. (Cl. 229—6)

The invention relates to improvements in chick boxes adapted for the shipment of young chickens or chicks, and has for its primary object the provision of an improved construction and arrangement of the class indicated which is capable of economical production and highly efficient in use.

Another object of the invention is the provision of an improved construction of the character indicated so constructed and arranged that it may be shipped flat, subsequently assembled, and highly efficient in use.

Another object of the invention is the provision of a construction of the character indicated so constructed and arranged as to provide proper ventilation for the chicks during shipping and under all conditions.

Another object of the invention is the provision of a construction of the character indicated so constructed and arranged as to be adequately reinforced against collapsing and crushing the chicks during transportation.

Other objects will appear hereinafter.

The invention consists of the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of the specification and in which

Fig. 1 is a perspective view of a box embodying the invention;

Fig. 2, a top plan view of the same with the cover sections raised to disclose the interior arrangement;

Fig. 3, a partial section taken substantially on line 3—3 of Fig. 4;

Fig. 4, a transverse section of the box taken substantially on line 4—4 but showing the lid closed in full lines and partially open in dotted lines;

Fig. 5, a plan view of one end of a blank from which the body portion of the box is made;

Fig. 6, a plan view of one end of a blank from which a combined partition and cover member is formed;

Fig. 7, a plan view of one end of a blank from which another partition is formed; and

Fig. 8, an enlarged section taken substantially on line 8 of Fig. 6.

The embodiment of the invention illustrated in the drawings comprises a main body portion 10 formed from a blank of cellular or corrugated paper or fibre board and generally in square form as shown. The box body 10 is provided with side walls 11 connected with the main body 10 by creased lines 12 so that said side walls may be bent upwardly into vertical positions. Cooperating with the side walls 11 are corner walls 13 connected with the body 10 by diagonal lines or creases 14 and so arranged that said corner walls may be bent upwardly as indicated. Each side wall 11 is provided at its ends with a securing flap 15 connected therewith by an upwardly and inwardly inclined creased line 16, and each securing flap 15 is provided with a locking tip 17 joined thereto by a line creasing 18 parallel with the line 16 as shown. Each locking tip 17 is provided with a locking notch 19 as shown. Each corner wall 13 is provided with a central slot 20 and at its top with a projection having parallel creases 21 defining and supporting wall 22, said projection terminating in a triangular locking tip 23 having a locking notch 24 at its apex. By this arrangement a blank is provided which may be readily assembled into box form by bending upwardly the corner walls 13 and side walls 11, and inserting the locking tips 17 into the corresponding slot 20 until the notches 19 engage the top of the slot 20, thereby locking the parts in box form.

Associated with the body member 10 is a combined partition and cover member having a central partition forming portion consisting of two identical halves 25 joined centrally by a creased line 26 so that said halves 25 may be folded together with the line 26 at the bottom. Central notches 27 are formed in the portions 25 and the meeting of lower ends of said notches are flared at 28 for a purpose to be presently described. Each of the portions 25 is provided at each end with a locking flap 29 having a locking notch 30 at its outer or upper edge, and with knock-out discs 31 partially severed therefrom so as to be readily detached to provide ventilating openings. At their edges the portions 25 are provided with cover flaps 32 joined thereto by a creased line 33 to permit of folding. Ventilating notches 34 are provided at the ends of the creased line 33, and another creased line 35 is provided as shown parallel to the line 33 to permit of folding to form one side of a central ridge best shown in Figs. 1 and 4. Semi-circular lips 37 are cut from each portion 36 along the line 35 so as to cause ventilating openings at these points when the parts are assembled, with the cover portions 32 bent at angles to the portions 36 as indicated. Cooperating notches 38 are provided as shown at each side of each cover portion 32, and notches 39 at the apices thereof for a purpose to be presently described. Ventilating knock-out discs

40 and combined ventilating and locking openings 41—42 are also provided in each cover portion 32 as shown and for a purpose to be presently described. By this arrangement a combined partition and cover member is provided, so constructed and arranged that the central portions 25 may be folded upon each other along the line 26 to constitute a partition of the box body and the cover portions 32 utilized as the cover thereof as indicated.

Another partition member is formed from a blank constituting two portions 43 connected by creased lines 44 for folding upon each other with the lines 44 at the top. Slots 45 and 46 are provided between the portions 43 to outline upwardly projecting locking members 47 having locking points 48 as indicated. Each of the portions 43 is also provided with a central slot 49 and at each end with locking flaps 50 having locking notches 51 for purposes to be presently described.

The partition members 43—43, 25—25 cover members 32 and side walls 11 are all equipped with numerous knock-out discs 31 for adjustably ventilating purposes, as will be presently described.

In assembling the parts, the cover portion is first centrally folded along the line 26 to bring the line 26 at the bottom and the cover portions 32 at the top. Then the partition member 43 is folded centrally along the lines 44 to bring the locking members 47 at the top. The two partitions thus formed are then interlocked together in right angle relation by means of the slots 27, 28 and 49 as shown, the folding portions 28 facilitating the assembling and the cross-shaped structure thus provided which will stand alone. The assembled partitions are then properly positioned on the body blank 10 with the partitions thus formed extending diagonally thereof. Then the body member is formed into box form, as has already been described, by folding upwardly the corner walls 13 and side walls 11 and inserting the locking tips 17 in the slots 20. At the same time the tongues 29 and 50 at the ends of the partitions are also inserted through the slots 20, as will be readily understood. Then the tips 23 are folded downwardly and placed in interlocking relation with the notches 19 and 51. In this manner a strong and rigid box is provided having four triangular shaped compartments. After the chicks have been placed in the box, the cover member is folded downwardly and notches 38 and 39 forced over the projections of the corner walls 13 as indicated, the openings 41, 42 interlocking with the locking members 47, 48 to hold said cover in place, the portions 36 forming a central ridge as indicated. For ventilating purposes sufficient of the knock-out discs 31 should be removed depending upon the weather. In very cold weather the openings 34, those caused by the lips 37, and openings 41 will probably suffice. In warmer weather more of the knock-out discs 31 and 40 should be removed depending upon the warmth as will be readily understood by those skilled in this art. The relatively large knock-out discs 40 are arranged as shown over the underlying partition so as to prevent any intended removal thereof by mischievous boys or otherwise.

While I have illustrated and described the preferred form of construction for carrying the invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details disclosed, but desire to avail myself of such variations and modifications as fall within the scope of the appended claims.

1. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable substantially vertical side and corner walls, said corner walls being provided with central slots and said side walls provided with locking members foldable around and insertable in said slots to hold said body in box form.

2. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable substantially vertical side and corner walls, said corner walls being provided with central slots and said side walls provided with locking members foldable around and insertable in said slots to hold said body in box form; and a combined partition and cover member therefor.

3. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable substantially vertical side and corner walls, said corner walls being provided with central slots and said side walls provided with locking members foldable around and insertable in said slots to hold said body in box form; and partitions for said box having locking members at their ends engaging the slots in said corner walls.

4. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable substantially vertical side and corner walls, said corner walls being provided with central slots and said side walls provided with locking members foldable around and insertable in said slots to hold said body in box form; and a combined partition and cover member therefor, having locking members at their ends engaging the slots in said corner walls.

5. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable side and corner walls, said corner walls being provided with central slots and said side walls provided with locking members insertable in said slots to hold said body in box form; and partitions for said box having locking members at their ends engaging the slots in said corner walls, said corner walls being provided with upward extensions folded to form supports, the ends thereof interlocking with the corresponding partitions.

6. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable side and corner walls, said corner walls being provided with central slots and said side walls provided with locking members insertable in said slots to hold said body in box form; and a combined partition and cover member therefor, having locking members at their ends engaging the slots in said corner walls, said corner walls being provided with upward extensions folded to form supports, the ends thereof interlocking with the corresponding partitions.

7. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable side and diagonal corner walls, said corner walls being provided with central slots and said side walls provided with locking members insertable in said slots to hold said body in box form; a combined

partition and cover member for said body made from a blank doubled centrally upon itself to form a partition of double thickness with the line of fold at the bottom, the sides of said partition being extended to form cover members, the ends of said partitions being provided with locking members engaging the slots in the corresponding corner walls; and another partition for said box formed from a blank doubled centrally upon itself to form a partition of double thickness with the line of fold at the top, said partitions being slotted centrally to interlock with each other and hold each other in place.

8. A box of the class described comprising a collapsible body made from a blank having a central portion provided with foldable side and diagonal corner walls, said corner walls being provided with central slots and said side walls provided with locking members insertable in said slots to hold said body in box form; a combined partition and cover member for said body made from a blank doubled centrally upon itself to form a partition of double thickness with the line of fold at the bottom, the sides of said partition being extended to form cover members, the ends of said partitions being provided with locking members engaging the slots in the corresponding corner walls; and another partition for said box formed from a blank doubled centrally upon itself to form a partition of double thickness with the line of fold at the top, said partitions being slotted centrally to interlock with each other and hold each other in place, said corner walls being provided with upward extensions folded to form supports, the ends thereof interlocking with the corresponding partitions.

9. A partition for a box of the class described comprising a blank doubled centrally upon itself to form a partition of double thickness with the line of fold at the top, there being central slots in said partition on opposite sides of the folded line defining upwardly extending locking members adapted and arranged to interlock with the cover of the box.

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