

April 21, 1970

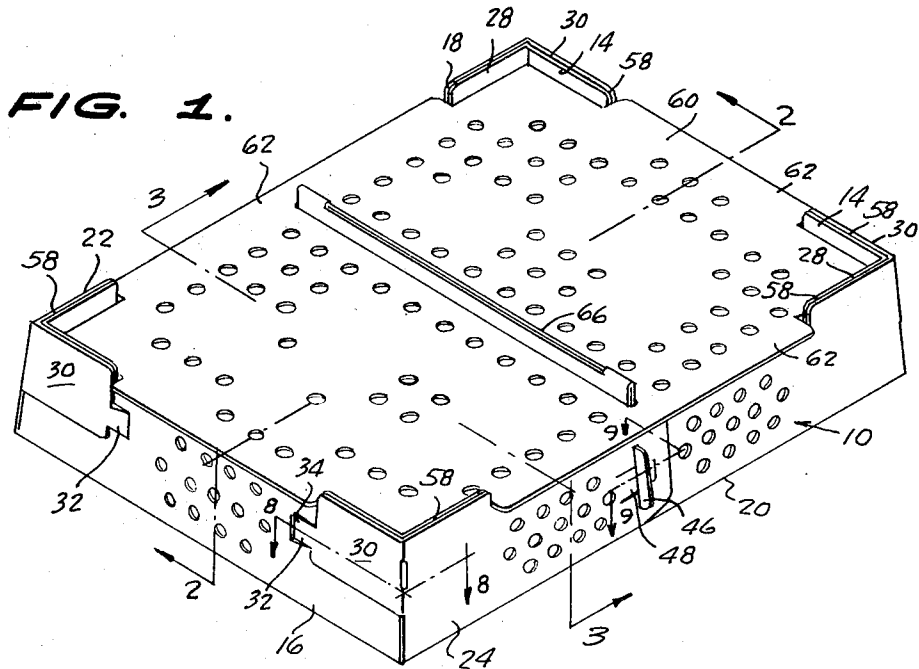
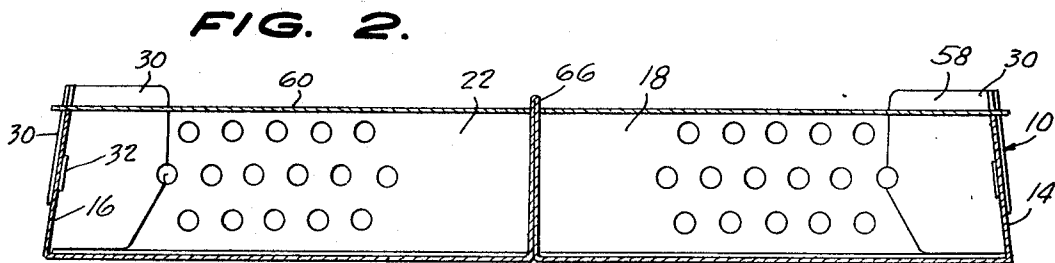
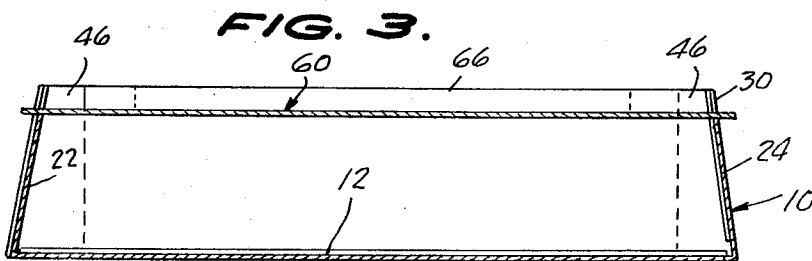
T. L. WILCOX ET AL

3,507,441

CHICK SHIPPING CONTAINER WITH DETACHABLE FEEDER TRAY

Filed June 28, 1968

5 Sheets-Sheet 1



INVENTORS.

THOMAS L. WILCOX,
FRANK L. GIROUD,

BY

Berman, Davidson & Berman

ATTORNEYS.

April 21, 1970

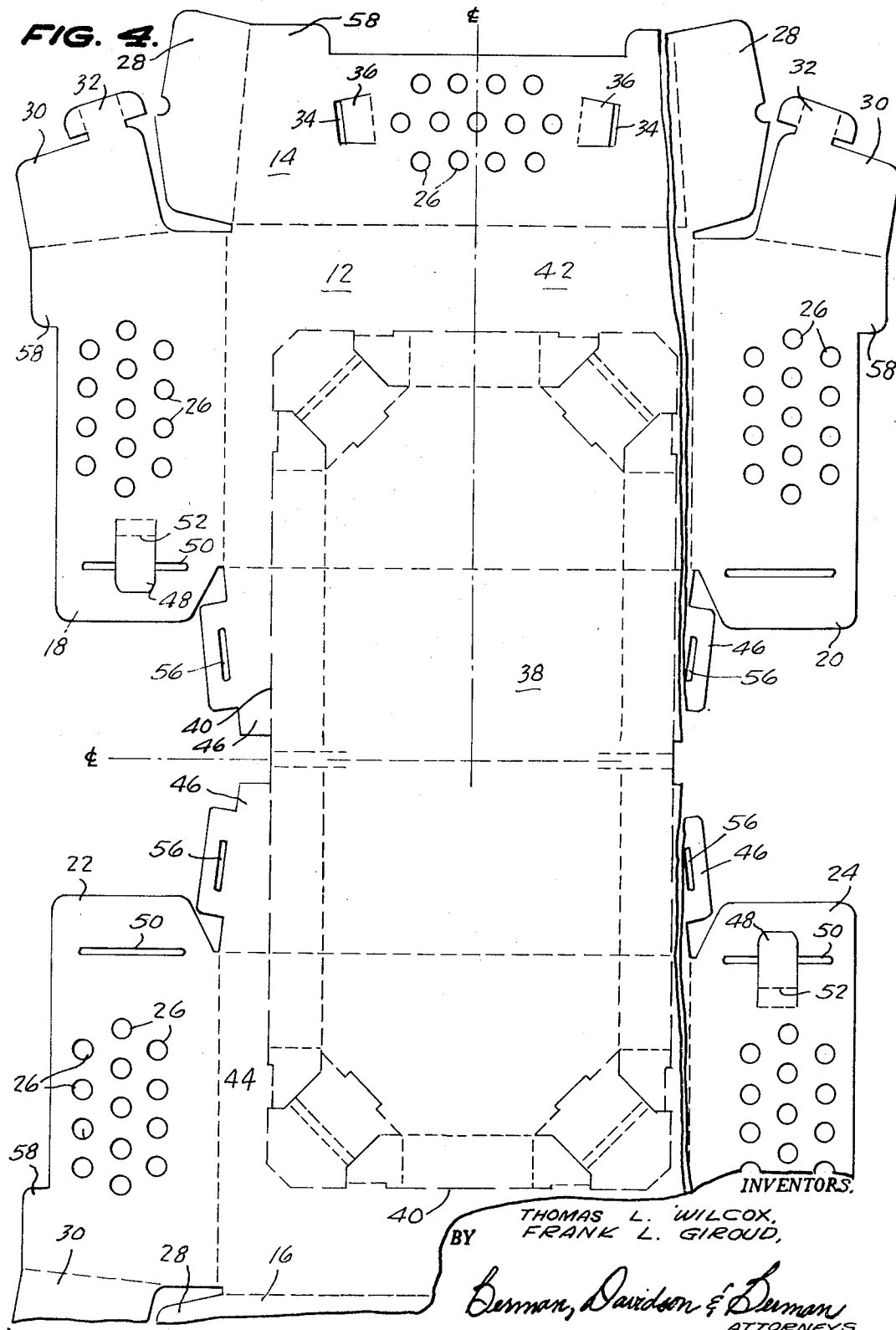
T. L. WILCOX ET AL

3,507,441

CHICK SHIPPING CONTAINER WITH DETACHABLE FEEDER TRAY

Filed June 28, 1968

5 Sheets-Sheet 2



April 21, 1970

T. L. WILCOX ET AL

3,507,441

CHICK SHIPPING CONTAINER WITH DETACHABLE FEEDER TRAY

Filed June 28, 1968

5 Sheets-Sheet 3

FIG. 5.

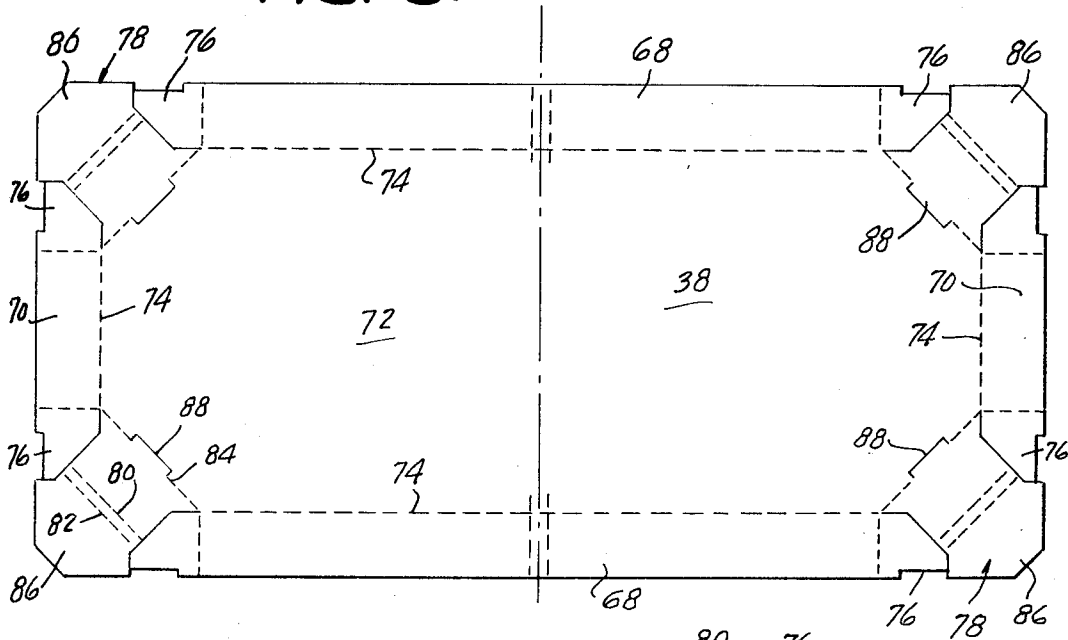
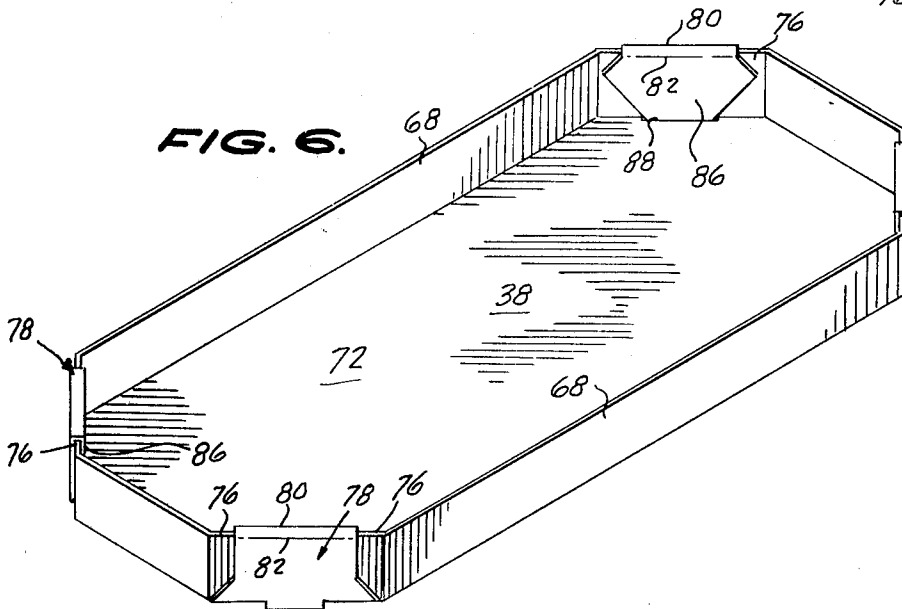


FIG. 6.



INVENTORS.

THOMAS L. WILCOX,
FRANK L. GIROUD,

BY

Berman, Davidson & Berman

ATTORNEYS.

April 21, 1970

T. L. WILCOX ET AL

3,507,441

CHICK SHIPPING CONTAINER WITH DETACHABLE FEEDER TRAY

Filed June 28, 1968

5 Sheets-Sheet 4

FIG. 7.

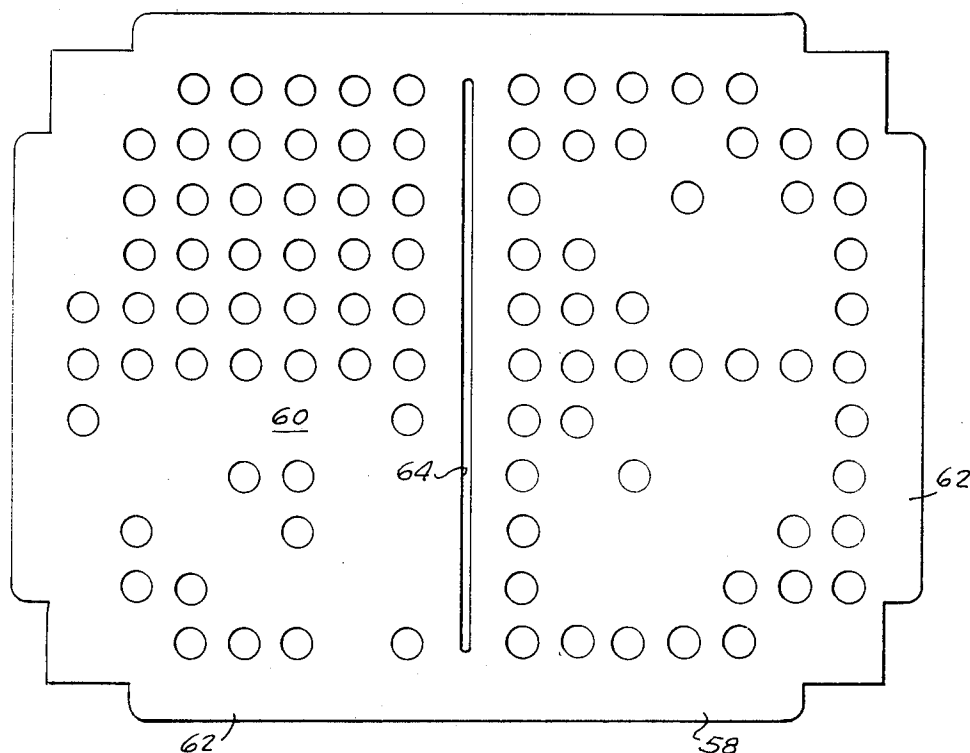


FIG. 8.

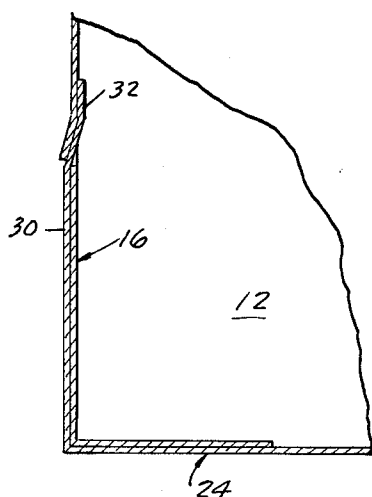
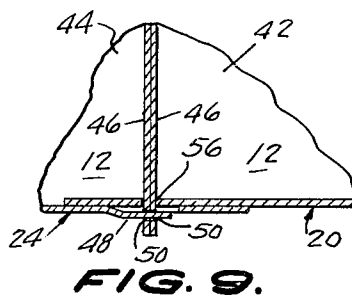


FIG. 9.

INVENTORS.
THOMAS L. WILCOX,
FRANK L. GIROUD,
BY
Berman, Davidson & Berman
ATTORNEYS.

April 21, 1970

T. L. WILCOX ET AL

3,507,441

CHICK SHIPPING CONTAINER WITH DETACHABLE FEEDER TRAY

Filed June 28, 1968

5 Sheets-Sheet 5

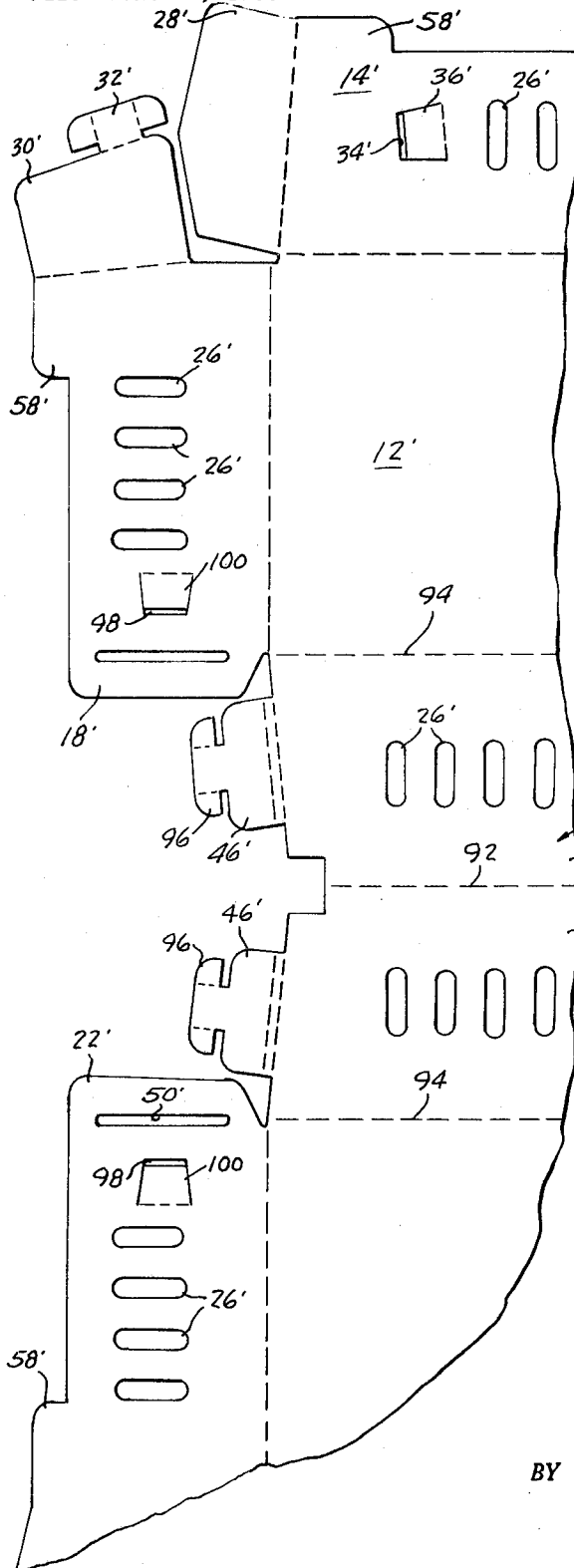


FIG. 10.

FIG. 11.

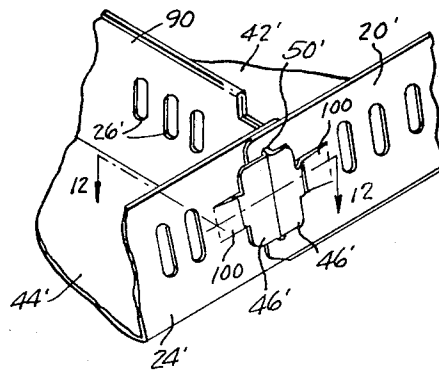
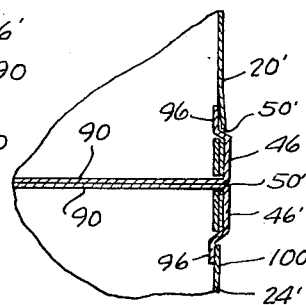


FIG. 12.

INVENTORS.

THOMAS L. WILCOX,
FRANK L. GIROUD,

BY

Berman, Davidson & Berman
ATTORNEYS.

1

3,507,441

CHICK SHIPPING CONTAINER WITH DETACHABLE FEEDER TRAY

Thomas L. Wilcox and Frank L. Giroud, both of
P.O. Box 31157, Indianapolis, Ind. 46231
Filed June 28, 1968, Ser. No. 741,122
Int. Cl. A01k 31/18; B65d 5/26, 5/48

U.S. Cl. 229—35

10 Claims

ABSTRACT OF THE DISCLOSURE

A device of one-piece construction for forming a box that is completely stapleless and in which the one-piece construction of the body and partition of the box eliminates the need for two separate cross partitions. The box has reinforced corners and the box is provided with a removable or tear-out feeder tray incorporated in the bottom of the box, which eliminates the need for separate die-cut sheets to form a feeder tray.

The present invention relates to an animal container construction, and more particularly to an improved construction of such container for carrying and transporting live baby chicks, poults, ducklings, goslings, or other baby fowl.

It is an object of the present invention to provide a box that is formed from a blank sheet so that the box is completely stapleless when the box has been set up.

It is yet another object of the present invention to provide a one-piece construction of the body and partition of the box which eliminates the need for two separate cross partitions.

Another object of the present invention is to provide a box that is formed from a blank sheet in which there is no long partition to restrict the air movement and to thus give better ventilation of the box and the live baby chicks and the like that are carried in the box.

Still yet another object of the present invention is to provide a box or a container for baby chicks and the like which has reinforced corners which add to the stacking strength of the box.

A further object of the present invention is to provide a blank sheet for forming a box therefrom, which is provided with a removable or detachable feeder tray outlined in the bottom of the box so that the blank sheet can be formed into a box for shipping baby chicks and the like, and after it has been utilized as a container for baby chicks and has reached its destination, then the detachable feeder tray in the box may be separated from the remaining portions of the box and the box portions discarded while the detachable feeder tray may be erected and used as a feeder tray for the chicks.

Another object of the present invention is to provide a blank sheet for forming a box therefrom which is provided with a removable or detachable feeder tray outlined in the bottom of the box so that the blank sheet can be formed into a box for shipping baby chicks and the like, and after it has been utilized as a container for baby chicks and has reached its destination, then the detachable feeder tray in the box may be separated from the remaining portions of the box and the box portions discarded while the detachable feeder tray may be erected and used as a feeder tray for the chicks.

Still a further object of the present invention is to provide a box that is divided into two sections only for carrying live baby chicks and the like, and which requires only two cushioning or absorbent baby chick pads and not four, as required heretofore in other boxes that have four separate sections.

Various other objects and advantages of the present invention will be readily apparent from the following detailed description, when considered in connection with the accompanying drawings, forming a part thereof, and in which:

2

FIGURE 1 is a perspective view of the box set up, which embodies the present invention;

FIGURE 2 is a section on an enlarged scale taken along the lines 2—2 of FIGURE 1;

FIGURE 3 is a enlarged section taken along the lines 3—3 of FIGURE 1;

FIGURE 4 is a plan view of the blank from which the body of the box is made and which further illustrates the removable or tear-out sheet incorporated in the blank from which the feeder tray is made;

FIGURE 5 is a plan view of the sheet from which the tear-out feeder tray is made and which sheet is incorporated in the blank shown in FIGURE 4;

FIGURE 6 is a perspective view of the feeder tray after it has been set up from the sheet shown in FIGURE 5;

FIGURE 7 is a view in plan of a cover member that is disposed over the box shown in FIGURE 1;

FIGURE 8 is a detail view taken along the lines 8—8 of FIGURE 1;

FIGURE 9 is a detail taken along the lines 9—9 of FIGURE 1;

FIGURE 10 is a plan view of another blank form from which the body of the box embodied in the present invention is made;

FIGURE 11 is a perspective detail view illustrating the partition formed in the body of a box made from the blank in FIGURE 10; and

FIGURE 12 is a section taken along the lines 12—12 of FIGURE 11.

Referring to the drawings, the reference numeral 10 generally designates a box or a container for carrying live chicks, poult, and the like. This box is made from a main box body blank as shown in FIGURE 4 of the drawings, having a substantially rectangular bottom wall section 12, end wall sections 14 and 16, and side wall sections 18, 20, 22 and 24.

It will be noted that the end walls 14 and 16 and the side wall sections 18, 20, 22 and 24 are adapted to be folded upwardly along the dotted lines, which indicates score lines with respect to the bottom wall section 12, so as to form the ends and the sides of a box when it is set up. It will further be noted that the end wall sections and the side wall sections are provided with a plurality of perforations 26 therein for ventilation purposes, and the blank is made out of cardboard or paper compounded material.

The end wall sections 14 and 16 are provided with flaps 28. The flaps 29 are tucked inwardly of the side wall sections 18 and 20 when the side and end wall sections are turned upwardly with respect to the bottom section 12. The side wall sections 18 and 20 are provided with flaps 30 having tongues 32 thereon, which are adapted to be inserted within slots 34 on the end wall section 14, when the sides and the ends have been folded upwardly to form the box. The end wall 16 also has a similar provision of flaps 28 while the side wall sections 22 and 24 have similar flaps 30 and tongues 32 thereon adapted to fit into similar slots 34 on the end wall section 16. The portions of the walls 14 and 16 adjacent the slots 34 are provided with tabs 36.

Referring to FIGURE 4, it will be noted that the two sections forming the end wall 14 and its adjacent interlocking or complementary side walls 18 and 20 are spaced on the blank from the opposite end wall section 16 and its complementary or interlocking side wall sections 22 and 24 by an intermediate sheet or blank 38, having a perforated line 40 completely circumscribing the blank 38, as indicated in FIGURE 4. This blank 38 is substantially rectangular in configuration and forms a sheet or a blank for a detachable feeder tray, which blank 38 is

3

best seen after it is detached in FIGURE 5, and is best shown in FIGURE 6 in its set-up arrangement. When the blank 38 for the feeder tray has been completely detached or removed from the main blank by tearing out the blank 38 from the bottom wall section 12, the bottom wall section 12 is divided into two separate parts, namely parts 42 and 44, as indicated in the view shown in FIGURE 4.

After the respective end walls 14 and 16 have been folded upwardly along their score lines with respect to the bottom wall 12, and the side sections have been folded upwardly, and the flaps 30 and their respective tongues 32 have been properly inserted through the slots 34 in the end walls, these two separate parts 42 and 44 are now ready to be attached to one another. The portions 42 and 44 of the bottom wall section 12 are provided with flaps 46 adjacent their respective wall sections, and these flaps 46 are disposed so as to extend toward one another, as best seen in FIGURE 4. The oppositely disposed side wall sections 18 and 24, that is the side wall sections disposed on the parts 42 and 44 which are also disposed on opposite sides of the blank, are provided with similar tongues 48, as best seen in FIGURES 4 and 9, which have their inner ends adapted to be pushed inwardly with respect to the side wall sections 18 and 24 after they have been folded upwardly, for securing the opposite parts 42 and 44 of the blank together. An elongated slot 50 is disposed in the side walls 18 and 24 adjacent the inner ends of the tongues 48 and the outer ends of the tongues 48 are provided with a fold or crease line 52. The two parts 42 and 44 are brought together and the flaps 46 on these parts are folded upwardly or at right angles with respect to the bottom wall 12. Thereafter, the flaps 46 on each of the two parts 42 and 44 are brought together in a budding relationship, as best seen in FIGURE 9, and the ends of the flaps 46 are pushed through the slots 50, so as to extend outwardly of the side wall portions 24 and 20, and the respective side wall portions on the other side. All of the flaps 46 are provided with slots 56 through which the tongues 48 are pushed or inserted to lock the two parts 42 and 44 together.

Referring to FIGURE 4, it will be noted that all of the side wall sections 18, 20, 22 and 24, as well as the flaps 30, have offset portions 58, so that when the box is set up as shown in FIGURE 1, the offset portions 58 provide a raised corner at each of the four corners of the box. A cover member 60 having a plurality of perforations therein for ventilation, and of substantially rectangular configuration, is disposed over the top of the box, as best seen in FIGURE 1. The cover member 60 is provided with offset portions 62 adjacent its opposite ends and opposite sides, which fit into the complementary openings provided between the offset portions 58 of the side and end wall sections. The cover member 60 is further provided with an elongated slot 64 therein for receiving a vertical partition member 66 therethrough, as best seen in FIGURES 1 and 2.

Referring to FIGURES 5 and 6, the blank 38 that is detachably connected to the bottom wall section 12 is substantially rectangular in configuration, and is provided with side wall sections 68 and end wall sections 70 adapted to be folded upwardly with respect to the bottom 72 thereof, by providing crease lines or fold lines 74 in the blank as indicated in FIGURE 5. The side walls 68 and the end walls 70 are further provided with flaps 76 thereon, which flaps 76 are disposed adjacent a corner flap 78. The flaps 78 are provided with parallel fold lines 80 and 82, and a fold line 84 adjacent the bottom 72, so that the corner flaps 78 can have their outer section 86 folded inwardly over the respective adjacent flaps 76 on the sides and ends of the blank 38. Referring to FIGURE 6, it will be noted that the corner flaps 78 are provided with cuts or slits 88 therein in the central portion

4

of the fold lines 84, so that when the outer section 86 is tucked inwardly and over the flaps 76, the lower edge of the flap 86 will be inserted into the slit or cut formed by folding the corner flap 78 upwardly with respect to the bottom 72. Thus, the feeder tray is formed by folding the side and end walls 68 and 70 upwardly, and by folding the flap 78 from the position shown in FIGURE 5 into the position shown in FIGURE 6, to complete the feeder tray.

Referring to the embodiment of the invention shown in FIGURES 10 to 12, this is substantially the same as the embodiment described in connection with FIGURES 1 to 4, and the similar parts will be given similar numbers except the reference numerals will be given primes.

Referring to FIGURE 10, the blank therein has a bottom 12' with end wall sections 14' and side wall sections 18', 20', 22' and 24'. The side walls are provided with the end flaps 30' and the flaps 30' are provided with tongues 32'. The side and end walls are further provided with elongated openings or perforations 26' for ventilation purposes. The side walls and the end walls are folded upwardly at right angles with respect to the bottom 12', in the same manner as described in connection with the embodiment shown in FIGURES 1 to 4 of the invention. The flaps 28' and the flaps 30' and the tongues 32' reinforce the corners of the box, and the tongues 32' are inserted through the slot 34', as also described in connection with the embodiment of the invention shown in FIGURES 1 to 4.

Referring to FIGURE 10, it will be noted that the partition 66' is formed from two identical walls 90 having a fold line 92 along which they are folded, and two fold lines 94 along which the walls 90 are folded upwardly with respect to the bottom 12'. When the walls 90 are folded upwardly at right angles with respect to each other, as best seen in FIGURE 11, and also folded with respect to the bottom 12', the walls 90 form a transverse partition 90 separating the two parts 42' and 44' of the box from each other. The opposite ends of the partition walls 90 are provided with flaps 46' having tongues 96 adapted to be inserted within the respective slots 50' on the respective side walls, which are folded upwardly along their fold lines with respect to the bottom 12' of the blank, as best seen in FIGURES 11 and 12. The tongues 96, after being inserted through the slots 50', are pulled completely through the slots 50' so that the flaps 46' pass through the slots 50', and the tongues 96 are thereafter inserted through the slots 98 provided in the side walls 18', 20', 22' and 24' adjacent the tabs 100 provided in the side walls, so that the partition walls are properly locked into position transversely of the set-up box, as clearly illustrated in the figures.

The set-up box as best seen in FIGURE 11, is provided with the cover member as already described in connection with the embodiment of the invention shown in FIGURES 1 to 4. In this embodiment of the invention, described in connection with FIGURES 10 to 12, it will be noted that the feeder tray is not provided in the flat blank sheet from which the box is erected.

Thus, it is apparent from the foregoing description that the present invention provides a box that is completely stapleless and can be of one-piece construction with the body and the partition of the box formed from a single flat blank so that it eliminates the need for two separate cross partitions.

Furthermore, the present invention does not have an additional long partition to restrict air movement and thus, it gives better ventilation.

It is also apparent that the present invention has reinforced corners which adds to the stacking strength.

The present invention further provides a removable or tear-out feeder tray that is incorporated in the bottom of the box, and which can be removed from the blank sheet which forms the box so as to eliminate the need for separate die-cut sheets to make a feeder tray.

5

Furthermore, since the box of the present invention is divided into two compartments or sections only, it only requires two cushioning or absorbent baby chick pads, and not four, as is required in other boxes that have four separate sections.

Inasmuch as various changes may be made in the relative arrangement and location and form of the parts, without departing from the spirit of the invention, it is not meant to limit the invention except by the scope of the appended claims.

What is claimed is:

1. A box structure of flexible fiberboard and the like comprising a bottom portion with integrally connected opposite end walls and side walls and a detachable tray portion, said end and side walls having fold lines therein for folding said end and side walls upwardly with respect to said bottom portion, flap means and slot means on said end and side walls for securing said end and side walls together in an upright position, and a separate cover member for closing off the top of said box, said detachable tray portion being formed in said bottom portion so said bottom portion separates into two separate parts when detached therefrom.

2. The box structure of claim 1 wherein each said side walls are formed of two separate sections.

3. The box structure of claim 2 wherein said flap means are on the ends of said side walls and have tongue means adapted to be inserted into said slot means which are located on said end walls.

4. The box structure of claim 3 wherein said end walls are provided with flap means which fold inwardly and adjacent said side walls to reinforce the box structure.

5. The box structure of claim 4 wherein said detachable tray portion is provided in said bottom portion with fold lines around its perimeter to provide upwardly extending side and end walls and a central bottom portion.

6. The box structure of claim 5 wherein said tray portion has slit means between each of said side and end walls forming flaps and said flaps have parallel fold lines in the middle thereof, and said end and side walls have

6

flaps, and said flaps between said slit means are disposed to fold over and secure said tray end and side wall flaps.

7. The box structure of claim 4 wherein the ends of said side walls have slot means and said bottom portion has flaps therein with tab means adapted to be inserted within said side wall slot means.

8. The box structure of claim 7 wherein slit means are provided on said bottom portion flaps and tongue means are provided on said side walls for insertion through said bottom portion slit means.

9. The box structure of claim 8 wherein partition means are provided extending across said bottom portion and between said side walls dividing it into two compartments.

10. The box structure of claim 2 wherein a partition means is provided comprising two transverse walls having their adjacent edges joined to each other and their edges disposed away from each other joined to said bottom portion.

References Cited

UNITED STATES PATENTS

2,147,675	2/1939	Shoemaker et al.	229—35
2,152,079	3/1939	Mott	206—45.12
2,167,913	8/1939	Shaw	229—35 X
2,288,457	6/1942	Inman	229—35 X
2,331,754	10/1943	Wohlers	229—39
2,422,438	6/1947	Richards	229—35 X
2,660,364	11/1953	Ferguson	229—35
3,069,060	12/1962	Chamberlin.	
3,393,859	7/1968	Giummo	229—35
2,751,138	6/1956	Laver.	

FOREIGN PATENTS

1,466,445	12/1966	France.
-----------	---------	---------

JOSEPH R. LECLAIR, Primary Examiner

S. E. LIPMAN, Assistant Examiner

U.S. Cl. X.R.

119—19; 229—6, 27, 30, 51