

July 22, 1958

A. A. WILLIAMS

2,844,294

CHICK CARTON

Filed Dec. 12, 1955

3 Sheets-Sheet 1

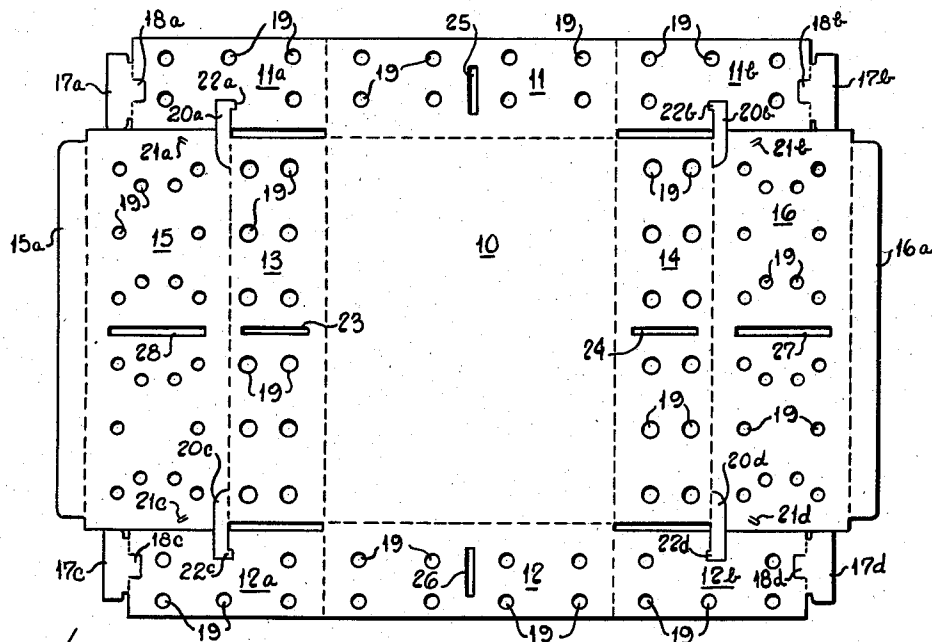


Fig-1

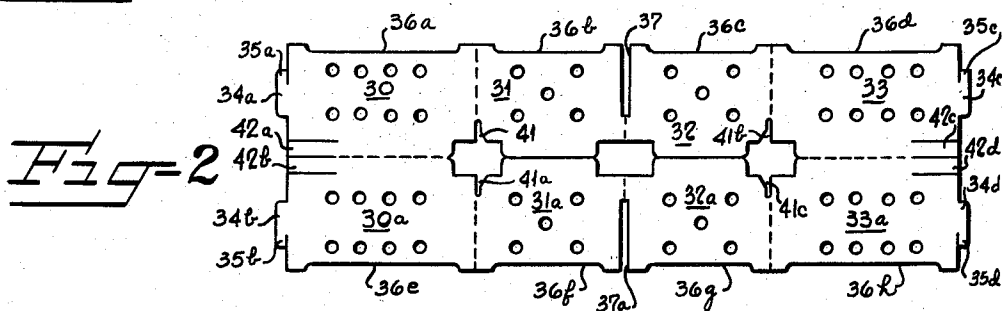
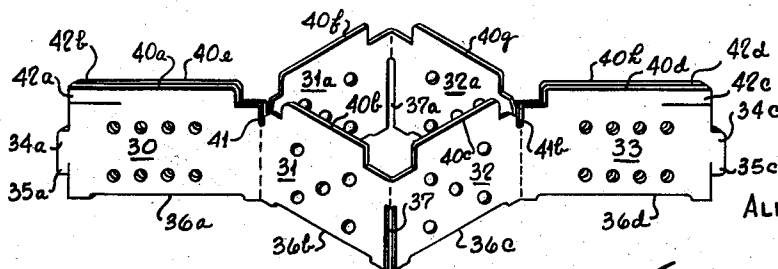


Fig-2



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Fig-4

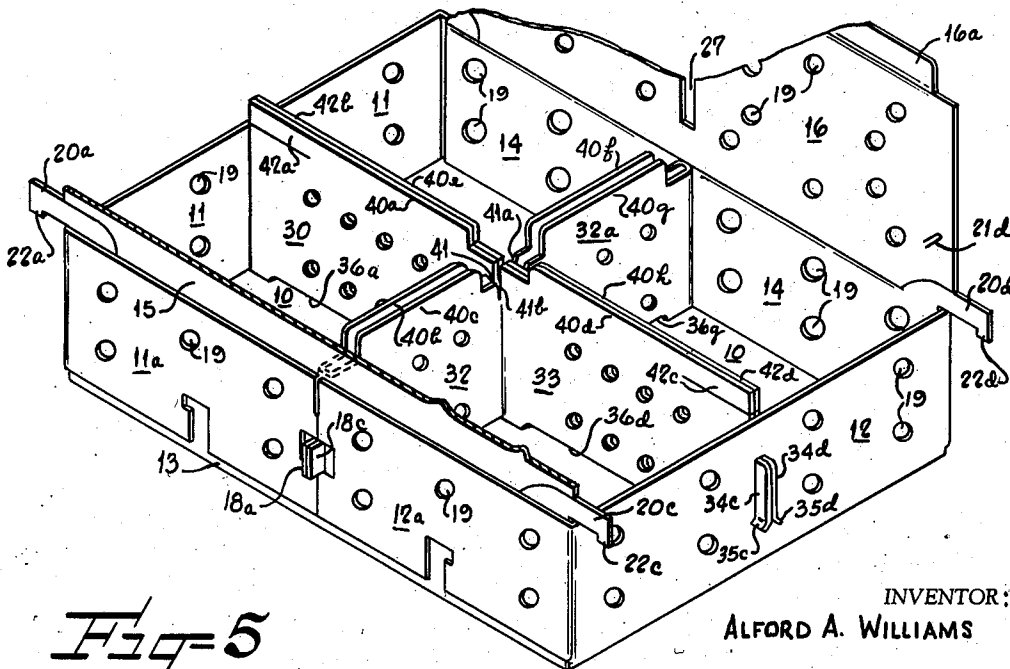
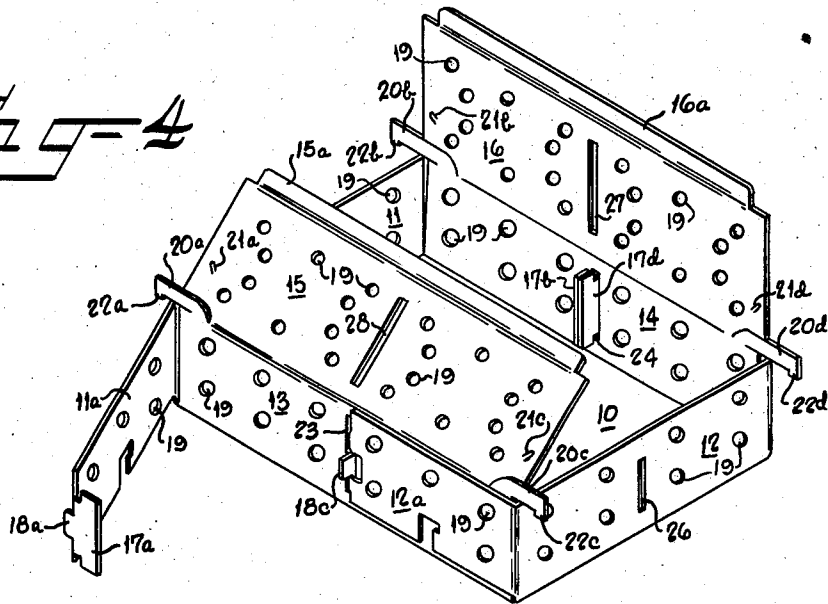


Fig-5

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3 Sheets-Sheet 3

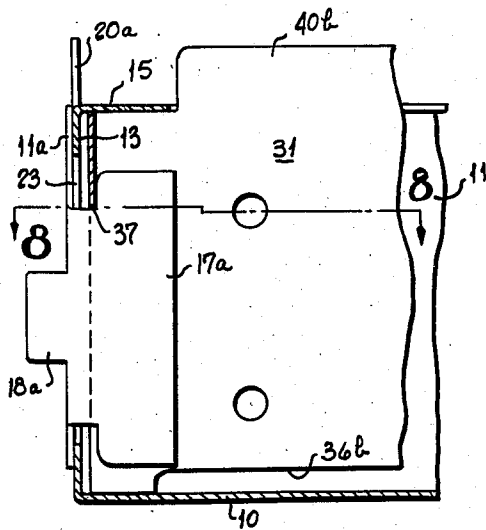
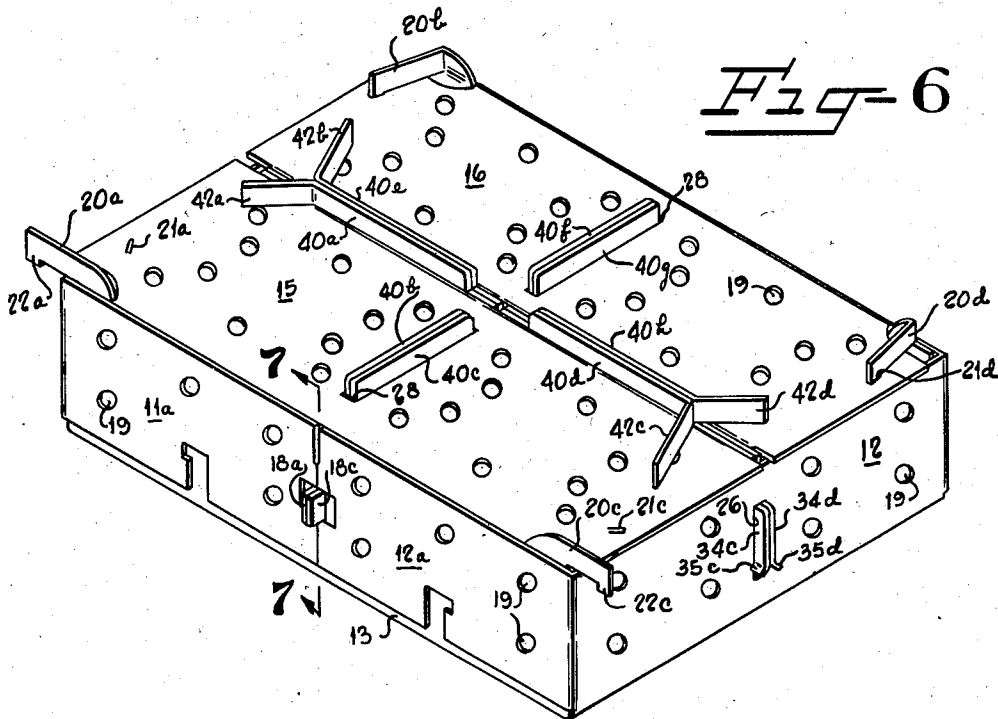


Fig-7

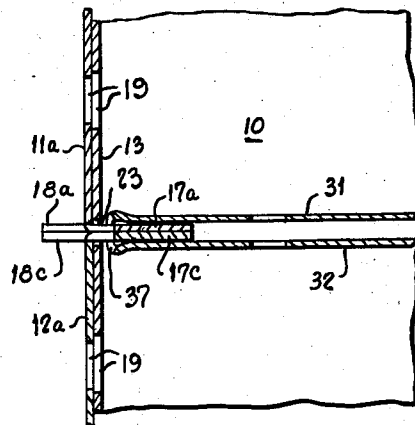


Fig-8

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2,844,294

CHICK CARTON

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8 Claims. (Cl. 229—6)

This invention relates to containers for shipping or transporting live chicks, and more particularly to a container formed from cardboard.

It is an object of this invention to provide a cardboard container for shipping or transporting live chicks wherein the carton body is formed from a single blank with the blank having portions interlocking with each other to maintain the carton in a rigid position, and wherein the carton is divided into a plurality of areas, namely four, by a divider which is formed from a single blank of material and wherein the divider interlocks with the sides and lid portions of the carton to give added rigidity to the carton and to provide locking means for the lid thereon.

It is also an object of this invention to provide a compartmental chick carton wherein the same has spacer elements on all the sides and lid portions to permit the stacking of cartons in spaced relation and wherein the side walls, lid and carton divider are provided with a plurality of apertures to permit cross ventilation through the carton to prevent the chicks contained therein from being smothered.

It is a further object of the invention to provide a compartmental chick container formed from only two pieces of cardboard wherein the container may be completely assembled by interlocking cardboard portions without the use of staples, glue or the like, to readily permit the carton to be shipped in collapsed condition to the hatchery and quickly assembled there as needed.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds when taken in connection with the accompanying drawings, in which—

Figure 1 is a plan view of the carton blank from which the chick carton is formed;

Figure 2 is a plan view of the carton blank from which the carton divider is formed;

Figure 3 is a perspective view of the carton divider showing the divider in an intermediate position of being assembled prior to being inserted in the chick carton;

Figure 4 is a perspective view showing the carton blank of Figure 1 in a partially assembled position;

Figure 5 is an enlarged perspective view of the chick carton with parts of the lid broken away for purposes of clarity and showing the carton divider positioned therein;

Figure 6 is a perspective view similar to Figure 5 and showing the chick carton completely assembled for shipping or transporting chicks;

Figure 7 is an enlarged fragmentary vertical section taken along line 7—7 in Figure 6 and showing the interlocking relation of the side wall flaps with the carton divider;

Figure 8 is a fragmentary horizontal section taken along line 8—8 of Figure 7 and clearly showing the manner in which the tabs on the side wall flaps interlock with the carton divider.

Referring more specifically to the drawings, and par-

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ticularly to Figure 1, the carton blank for forming the body portion of the chick carton is cut and scored to define a bottom wall 10, end walls 11 and 12, side walls 13 and 14, top flaps or lid portions 15 and 16 and end wall flaps 11a, 11b, 12a and 12b respectively. Each of the end wall flaps are hingedly connected to the end walls 11 and 12 but are separated from the side walls 13, 14 and top flaps 15, 16 by lines of cut. Each of the end wall flaps 11a, 11b, 12a, 12b are provided with locking tabs 17a, 17b, 17c and 17d respectively, each having formed integral therewith and extending rearwardly thereof side wall spacer elements 18a, 18b, 18c and 18d respectively. The top flaps 15 and 16 are provided with elongated tab portions 15a and 16a for aiding in maintaining the carton in closed position by frictionally engaging portions of the carton divider to be explained in detail later.

For fully ventilating the carton, a plurality of spaced apertures 19 are provided in the end walls 11, 12, side walls 13, 14, top flaps 15, 16 and the end wall flaps 11a, 11b, 12a and 12b, respectively. It will be observed in Figures 4, 5 and 6 that the apertures 19 in the end wall flaps 11a, 11b, 12a and 12b, respectively, are so positioned as to be aligned with the apertures in the side walls 13 and 14 when the carton is assembled.

Spacer elements 20a, 20b, 20c and 20d are hingedly connected along the junction of the side walls 13 and 14 with the top flaps or lid portions 15 and 16 respectively, and are provided with tab portions 22a, 22b, 22c and 22d which are received in apertures 21a, 21b, 21c and 21d, respectively, formed in the top flaps or lid portions 15 and 16 to maintain the spacer elements in an upright position as shown in Figure 6 for spacing stacked cartons to permit air to flow into the top flaps or lid portions thereof.

Slots or apertures 23, 24 are provided in the side walls 13, 14 for receiving the locking tabs 17a, 17b, 17c and 17d on the end wall flaps for maintaining the end walls 11, 12 and side walls 13 and 14 in an upright or perpendicular relation to the bottom wall 10 when assembling the carton as shown in Figure 4.

For erecting the carton blank of Figure 1, the side walls 13 and 14 are first folded into perpendicular relation to the bottom wall 10, then the end walls 11 and 12 are folded in a similar manner, after which the end flaps 11a, 11b, 12a and 12b are folded into right angular relation to their respective end walls 11, 12 and in juxtaposed relation to the side walls 13, 14. The locking tabs 17a, 17b, 17c and 17d are then inserted through the slots 23 and 24 in each of the side walls 13, 14. This stage of assembling the cartons is clearly shown in Figure 4 wherein only locking tab 17a remains to be inserted into the slot 23 to completely erect the wall portions of the carton.

To give added rigidity to the carton and to provide means for locking the lid portions or top flaps 15, 16 thereof in closed position and to divide the carton into a plurality of compartments, a substantially cross-shaped divider formed from a single piece of cardboard is provided which divider blank is shown in Figure 2. To receive end portions of the divider and lock same in the carton, apertures 25, 26 are provided in the end walls 11, 12. The interlocking positioning of the divider in the body portion of the carton will shortly be explained in detail.

The carton divider as shown in Figures 2 and 3 comprises walls 30, 30a, 31, 31a, 32, 32a, 33 and 33a. The walls 30, 33 are hingedly connected to the walls 30a, 33a, respectively, by their junction lines being only partially cut when the blank is stamped from cardboard material. The walls 31, 32 are completely severed from the walls 31a, 32a, respectively, as clearly shown in Figure 3. The

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walls 30, 30a, 33 and 33a are provided with projecting portions 34a, 34b, 34c and 34d respectively, for being received in the slots 25 and 26 in the end walls 11 and 12 of the carton. Each of the divider projecting portions is provided with end wall locking tabs 35a, 35b, 35c and 35d for locking the divider in the apertures 25, 26 in the end walls 11 and 12 of the cartons.

Each of the walls of the carton divider is provided with a recessed portion 36a, 36b, 36c, 36d, 36e, 36f, 36g and 36h along an edge portion to maintain the main portions of the dividers in spaced relation to the bottom wall 10 of the carton as shown in Figure 5 to permit complete ventilation of the carton to be explained in detail hereafter. For lockingly securing the carton divider to the side walls 13 and 14, slots 37 and 37a are provided in the medial portion of the divider as shown in Figures 2 and 3 for engaging the tab portions 17a, 17b, 17c and 17d extending from the carton end flaps. The locking tabs 17a, 17b, 17c and 17d are straddled by the edge portions of the divider walls 31, 32 and 31a, 32a defining the slots 37 and 37a when the divider is inserted in the carton as most clearly shown in Figures 7 and 8.

Step-like slots 41, 41a, 41b and 41c are provided in the carton divider along the junction line between the flaps 30 and 31, 30a and 31, 32 and 33, and 32a and 33a respectively, to frictionally engage the top flap tab portions 15a, 16a when the carton is closed to maintain the top flaps 15, 16 in position to be locked. The upper corner portions of the walls 30, 30a, 33 and 33a of the divider are provided with top flap locking tabs 42a, 42b, 42c and 42d for locking the top flaps 15, 16 of the carton as shown in Figure 6.

To assemble the carton divider for the same to be inserted in the carton of Figure 4, the divider as viewed in Figure 2 is folded so that the upper half portion of the divider is parallel to the lower half portion at which time the juxtaposed and hingedly connected walls 30, 30a and 33, 33a are moved toward each other as shown in Figure 3 until the walls 31, 31a are parallel or juxtaposed to the walls 32, 32a, respectively. In this position the divider is now ready to be inserted in the partially assembled carton shown in Figure 4.

It will be observed in Figures 5, 6 and 7 that the walls of the divider have a height greater than the depth of the carton which difference in dimensions is defined by the divider wall projecting portions 40a, 40b, 40c, 40d, 40e, 40f, 40g and 40h, which portions serve as additional spacer members (Figure 6) for spacing the top flaps 15, 16 of the carton from an adjacent carton stacked thereon. Also, the divider wall projecting portions serve to give added rigidity to the assembled carton. As will be observed in Figure 6, the divider wall projecting portions 40b, 40c and 40f and 40g project through the apertures 27 and 28 respectively formed in the top flap portions 15 and 16 of the carton to prevent the top flaps from being shifted longitudinally of the carton, which occurrence would permit the chicks to escape.

Upon the carton divider being placed in the carton, the divider locking tabs 35a, 35b, 35c and 35d will be spread out or moved away from each other to engage the outer surface of the end walls 11 and 12 to maintain the divider in locking relationship to the end walls of the carton. Upon the closing of the top flaps 15, 16 as shown in Figure 6 the elongated lid tabs 15a and 16a are frictionally engaged by the step-like apertures 41, 41a, 41b and 41c to frictionally secure the top flaps 15, 16 in closed position for the same to be locked. The top flap locking tabs 42a, 42b, 42c and 42d are then bent outwardly from each other to engage the top surface of top flaps 15 and 16 to lock the same in closed position.

As will be observed in Figure 6 wherein the chick carton is shown in assembled condition for being shipped, the projecting portions 18a, 18b, 18c and 18d space the carton side walls 13, 14 from adjacent juxtaposed cartons. The projections 34a, 34b, 34c and 34d space the ends walls 11

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and 12 of the carton from adjacent abutting cartons. The spacer elements 20a, 20b, 20c and 20d along with the projecting portions 40a, 40b, 40c, 40d, 40e, 40f, 40g and 40h on the carton divider space the top flaps 15, 16 of the carton from cartons stacked thereon. Thus the carton is provided with means to space the same from all adjacent cartons when the same is stacked to permit proper ventilation of the carton so that the chicks in the same will not be smothered while being shipped.

It is thus seen that there has been provided a chick carton wherein the carton is formed from a single sheet of cardboard material which has interlocking portions for permitting the carton to be assembled in an upright condition and wherein the carton is divided into a plurality of compartments by a divider formed from a single piece of cardboard material which divider also serves for giving added rigidity to the carton by interlocking with the same and provides carton spacer elements for the end walls and top of the carton to be spaced from adjacent cartons when a plurality of the same are stacked together. It will also be noted that all the walls of the carton and top and lid portions thereof are provided with apertures to obtain sufficient ventilation. Also the divider separating the carton into a plurality of compartments is provided with apertures and recessed portions spaced from the bottom wall of the carton for permitting cross ventilation through the various compartments. The carton divider also serves as locking means for lockingly securing the lid portions of the carton in closed position.

Accordingly, there has been provided a compartmental carton for shipping live chicks or the like which is formed from two pieces of cardboard material interlocking with each other to avoid the use of staplers or the like for securing the carton in assembled condition.

In the drawings and specification there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined in the claims.

I claim:

1. A carton having a bottom wall, end walls, side walls, lid portions hingedly connected to said side walls, end wall flaps hingedly connected to said end walls, locking tabs provided on the outer extremities of said end wall flaps, each of said side walls having an elongated slot provided in a medial portion thereof, said locking tabs positioned in said elongated slots to maintain the end and side walls of the carton in a perpendicular relation to the bottom wall of the carton, and said end flap locking tabs having formed integral therewith projecting portions extending outwardly beyond the side walls of the carton to space the same from adjacent cartons.

2. A carton according to claim 1 wherein each of the end walls of the carton are provided with an elongated slot, a cross-shaped divider formed of a single piece of material positioned in said carton to divide the same into a plurality of compartments, projecting portions provided on opposite ends of said divider, said projecting portions being positioned in said slots provided in said end walls, side portions of said divider having elongated slots lockingly engaging the locking tabs on said end wall flaps, and lid locking tabs provided on the upper corner portions of said divider for locking the lid portions of the carton in closed position.

3. A carton according to claim 2 wherein each of the lid portions of the carton are provided with transverse slots at the medial portion thereof, said divider having portions extending through said slots in each of said lid portions, whereby when the lid portions of the carton are closed the projecting portions of the divider space the lid portion of the carton from a carton stacked thereon.

4. A carton for transporting live chicks or the like comprising a bottom wall, end walls hingedly connected to said bottom wall, side walls hingedly connected to said

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bottom wall, top flaps hingedly connected to said side walls, and end flaps hingedly connected to opposed side edges of said end walls, each of said end flaps having a length of substantially one-half the length of each of said side walls, projecting tabs hingedly connected to the outer ends of said end wall flaps, each of said side walls having an elongated slot in the medial portion thereof, said projecting tabs extending through said elongated slots in said side walls, spacer elements formed integral with said projecting tabs to space the side walls of the carton from adjacent cartons, said end walls and top flaps each having a transverse slot provided in the medial portion thereof, a substantially cross-shaped carton divider resting on the bottom wall of said carton, opposite ends of said divider having projecting portions positioned in said slots in said end walls, opposite side portions of said divider lockingly engaging said projecting tabs on said end flaps, upper portions of said divider positioned in said transverse slots provided in said top flaps, and top flap locking tabs provided on opposite ends of said divider for lockingly securing the top flaps of the carton in closed position.

5. In a carton according to claim 4 wherein said carton is provided with spacer elements at the upper corners hingedly secured to said side walls, and said top flaps are provided with apertures for receiving portions of said spacer elements to maintain the same in an upright position whereby the top flaps of the carton are spaced from the bottom walls of a carton stacked thereon.

6. A carton for transporting live chicks or the like comprising a bottom wall, end walls hingedly connected to said bottom wall, side walls hingedly connected to said bottom wall, top flaps hingedly connected to said side walls, and end flaps hingedly connected to opposed side edges of said end walls, each of said end flaps having a length of substantially one-half the length of each of said side walls, projecting tabs hingedly connected to the outer ends of said end wall flaps, each of said side walls having an elongated slot in the medial portion thereof, said projecting tabs extending through said elongated slots in said side walls, each of said end walls having a transverse slot provided in the medial portion thereof, a substantial-

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ly cross-shaped carton divider resting on the bottom wall of said carton, opposite ends of said divider having projecting portions positioned in said slots in said end walls, opposite side portions of said divider lockingly engaging said end flap projecting tabs, and means for lockingly securing the top flaps of the carton in closed position.

7. In a carton according to claim 6 wherein said carton is provided with spacer elements at the upper corners hingedly secured to said side walls, and said top flaps are provided with apertures for receiving portions of said spacer elements to maintain the same in an upright position whereby the top flaps of the carton are spaced from the bottom walls of a carton stacked thereon.

8. A carton for transporting live chicks or the like comprising a bottom wall, end walls hingedly connected to said bottom wall, side walls hingedly connected to said bottom wall, top flaps hingedly connected to said side walls, and end flaps hingedly connected to opposed side edges of said end walls, each of said end flaps having a length of substantially one-half the length of each of said side walls, projecting tabs hingedly connected to the outer ends of said end wall flaps, each of said side walls having an elongated slot in the medial portion thereof, said projecting tabs extending through said elongated slots in said side walls, said end walls having a transverse slot provided in the medial portion thereof, a divider resting on the bottom wall of said carton, opposite ends of said divider having projecting portions positioned in said slots in said end walls, opposite side portions of said divider having elongated slots lockingly engaging said end flap projecting tabs, and top flap locking tabs provided on opposite ends of said divider for lockingly securing the top flaps of the carton in closed position.

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