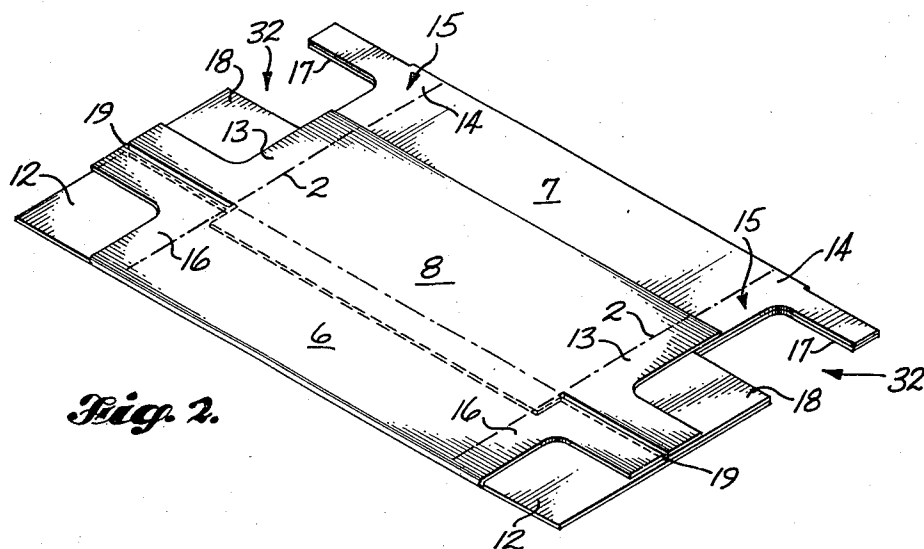
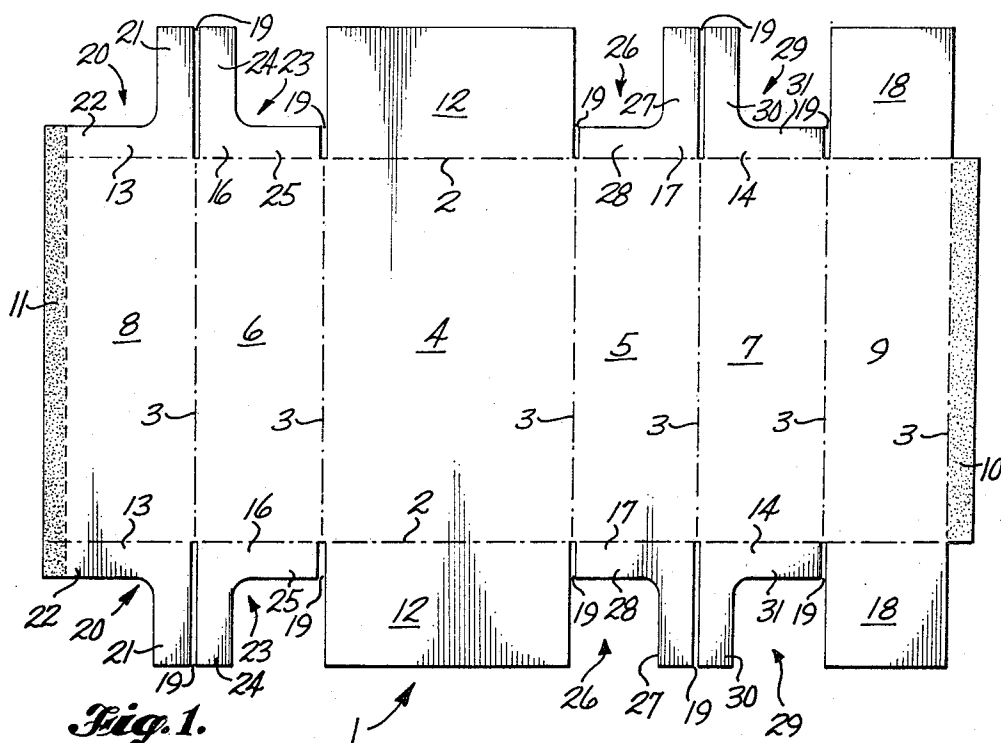


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METHOD OF PACKAGING MEAT IN A COMPARTMENTED CONTAINER

Original Filed April 4, 1967

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

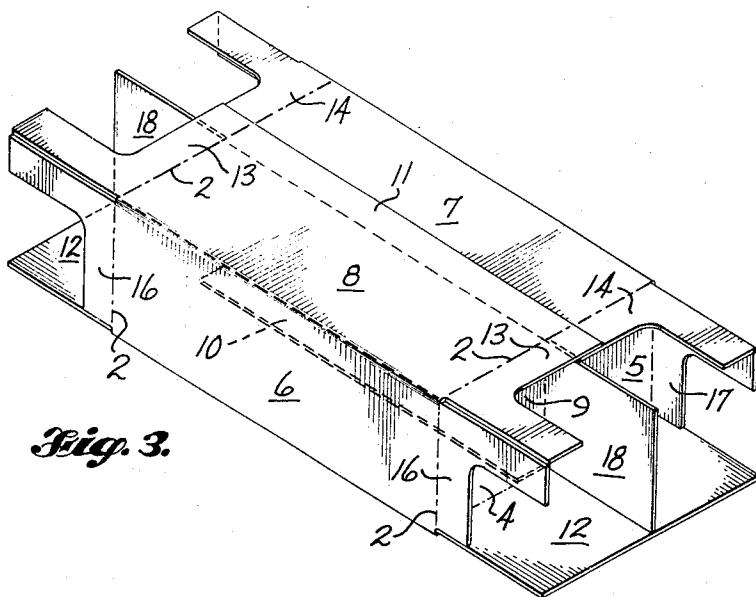


Fig. 3.

Fig. 4.

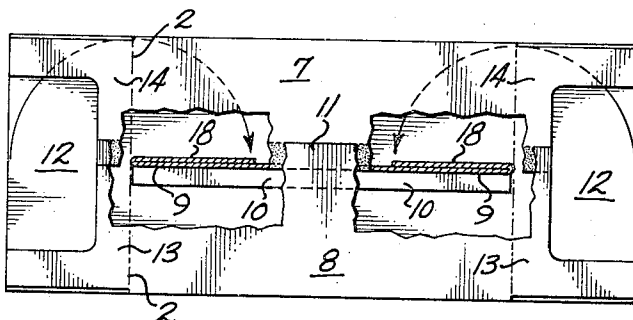
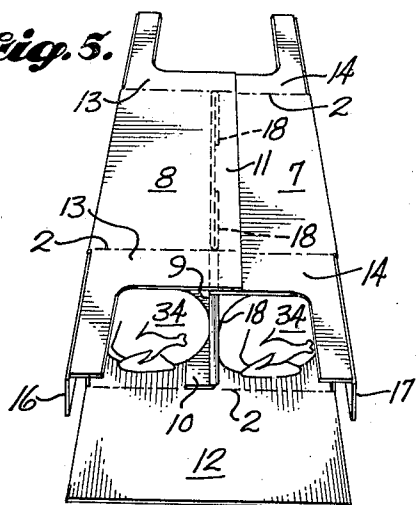


Fig. 5.



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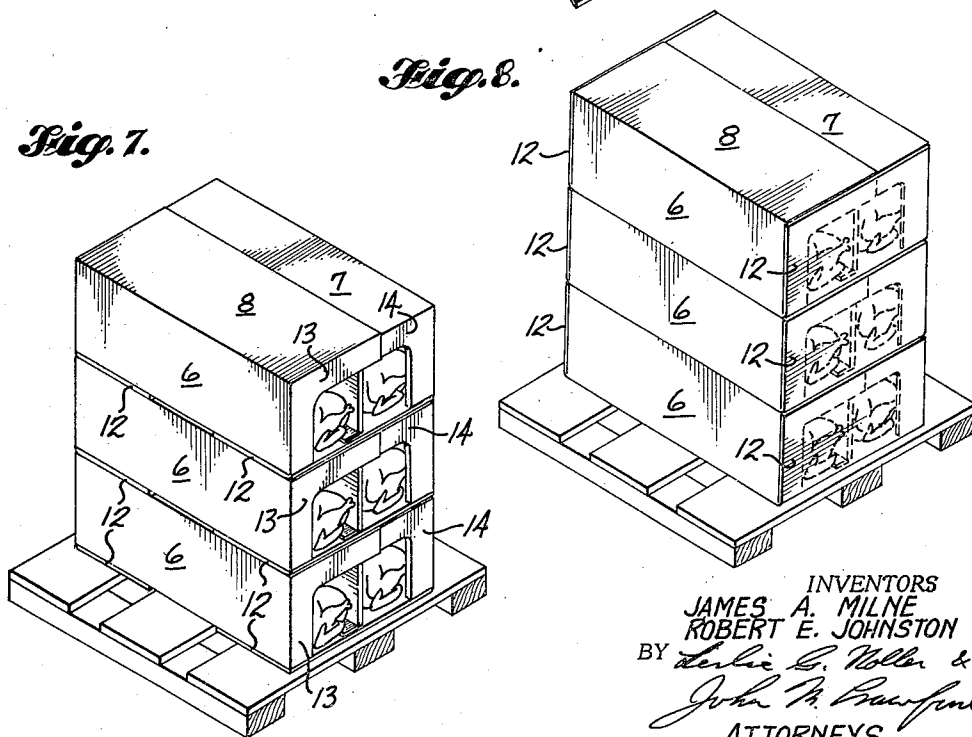
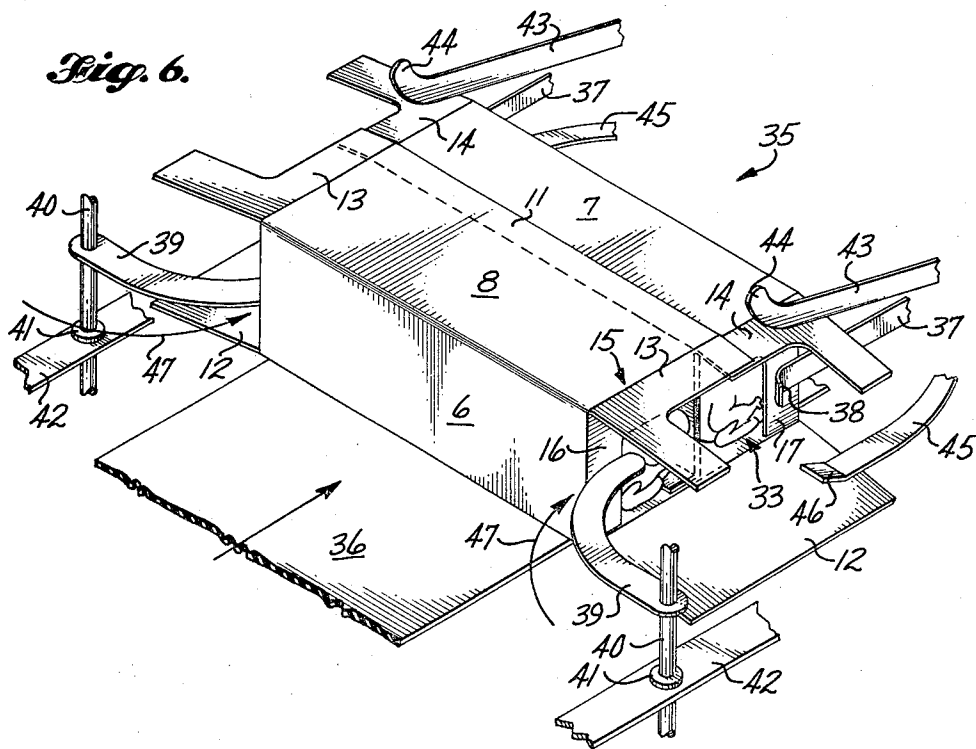
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METHOD OF PACKAGING MEAT IN A COMPARTMENTED CONTAINER

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Original application Apr. 4, 1967, Ser. No. 628,399.
Divided and this application Apr. 25, 1968, Ser. No. 724,052

Int. Cl. B65b 25/06; A23b 1/06
U.S. Cl. 99—194

1 Claim

ABSTRACT OF THE DISCLOSURE

A method of packaging meat in a container having a partition longitudinally positioned therein for receiving poultry or meat on each side of said partition with substantially open end closure flaps with reinforcing panels extending along the partition to materially increase the stacking strength filling the container with meat; allowing cooling medium to pass thru the end panel closure flap openings to freeze the meat and then closing the end closures by folding the solid and closure panels over the openings.

RELATED APPLICATION

This application is a division of application Ser. No. 628,399, now abandoned filed Apr. 4, 1967.

BACKGROUND OF THE INVENTION

In the manufacture of containers for shipping or storing meats or the like it is the practice to place the commodities within a regular slotted container and seal the same. It is desirable to provide ventilation openings in the container when the meat is to be subsequently frozen to allow the cooling medium to properly circulate within the container. Thus, circulation openings are provided through the walls of the container in the form of small circular holes in a predetermined pattern or in a random manner. These openings, however, must not weaken the stacking strength of the container. Accordingly, the number of openings are limited which results in poor circulation within the container. Examples of such structure are illustrated in U.S. Patent Nos. 2,894,672 and 2,005,597.

BRIEF DESCRIPTION OF THE PRESENT INVENTION

The present invention provides a container having a body shell which is rectangular and which is provided with a partition intermediate two of the walls. The end closure flaps of the container are provided with openings substantially the entire cross-section of the container so as to allow the cooling medium to readily circulate within the container to freeze or cool poultry or the like packed within the container. However, notwithstanding the substantially large openings at the end panels, a reinforcing panel is provided along the partition member which substantially increases the stacking strength of the container so that the same may be stacked one upon the other without detrimental effects to the container.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a plan view of the container blank of the present invention.

FIGURE 2 is a perspective view of the container blank folded into a knocked-down condition.

FIGURE 3 is a perspective view of the container in its erected form.

FIGURE 4 is a top plan view of the container with parts broken away to show internal details.

FIGURE 5 is a perspective view of the container after it is filled.

FIGURE 6 is a perspective view of the container illustrating the manner in which the end closure flaps are formed to provide an opening.

FIGURE 7 is a perspective view of a stack of containers with one of the end closure flaps folded underneath the container and the end open so as to receive cooling medium.

FIGURE 8 is a view similar to FIGURE 7 but with the end openings closed.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIGURE 1, the container blank 1 is provided with upper and lower horizontal score lines 2 with a plurality of vertical score lines 3 which divide the blank into a first side panel 4, end panels 5 and 6, second and third side panels 7 and 8, partition panel 9, and glue flap 10. A glue line 11 is provided on side panel 8 for a purpose to be hereinafter set forth.

Above and below horizontal score line 2 each of the aforementioned panels 4, 5, 6, 7 and 8 are provided with end closure flaps. Panel 4 is provided with a solid end closure flap 12, with panels 7 and 8 being provided with closure flaps 13 and 14. Panels 5 and 6 are also provided with end closure flaps 16 and 17 with a reinforcing flap 18 being hingedly connected to the partition member 9. Each of the end closure flaps are separated from each other by slots 19 as is conventional in the art.

Each of the end closure flaps 16 and 17 are provided with substantially rectangular cut-out portions 23 and 26. The cut-out portion 23 forms legs 24 and 25 on the end closure flap 16 that are perpendicular to each other, while the cut-out portion 26 provides legs 27 and 28 on the end closure flap 17 that are also perpendicular to each other. The legs 24 and 27 are adapted to come together at the center of the container when it is erected and filled to distribute weight above the carton more uniformly over the entire surface area. The legs 25 and 28, however, when folded into a closed position, as indicated in FIGURE 6, provide additional stacking weight since they are vertical. With the legs 24 and 27 folded into the closed position the end result is a substantially rectangular opening 33 within the end of the carton; see FIGURE 6. The end closure flaps 13 and 14 are also provided with cut-out portions 20 and 29 which are rectangular in configuration. The cut-out portion 20 forms legs 21 and 22 perpendicular to each other, while the cut-out portion 29 forms legs 30 and 31 that are perpendicular to each other. As is illustrated in FIGURE 2, the legs 22 and 31 overlap each other to form an end closure flap indicated at 15 and form a substantially rectangular opening 32 within the end closure flap 15. The opening 32 is adjacent to and is coaxial with the opening 33 formed by the closure flaps 16 and 17 as indicated in FIGURE 6.

When it is desired to assemble the container the blank 1 is folded along score line 3 that separates panels 5 and 7, and the glue flap 10 is adhered substantially at the center of the panel 4. Next, the blank is folded along score line 3 separating panels 4 and 6, and the glue line 11 is adhered to the opposite surface as indicated in FIGURE 2. In this position the panels 13 and 14 form the end closure panel 15 while the panels 7 and 8 together form a side panel of the container the same size as panel 4.

When it is desired to fill the container of the present invention with poultry or the like, it is erected to a rectangular configuration as illustrated in FIGURE 3. This may be brought about either manually or by a machine. Thereafter the partition flap 18 is folded adjacent to the partition member 9 as indicated in FIGURE 4. With the partition flap 18 in this position the stacking strength of

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the end of the container is materially increased because of the double thickness. Next, poultry 34 or the like is loaded into the two compartments so formed, as indicated in FIGURE 5.

The container that has been so filled is then moved to an end flap closing machine 35 and moved therealong by a conveyor belt 36. As the filled container moves toward the machine 35 the end closure flaps 17 engage a leading plow member 37 having out-turned end 38 which folds the flap 17 to adjacent the end of the box. Thereafter end flaps 16 are folded inwardly toward the box by a curved radial plow member 39 which is affixed to a rotatable shaft 40 mounted in a bearing 41 in a support strap 42. The arm 39 is rotated by the shaft 40 which is connected to a power source (not shown). As the filled container moves past the plows 37 and 39, an upper plow 43 having an up-turned end 44 engages the end closure flap 15 which folds the same downwardly to substantially close off the end of the container with openings 33 and 32 as indicated in FIGURE 6. Simultaneously with folding the flap 15 downwardly the flap 12 engages a lower plow 45 having an up-turned end 46 which folds the flap 12 downwardly so that it can subsequently be moved to underneath the box, as illustrated in FIGURE 7.

The container so filled may be stacked and then conveyed to a freezing compartment where the poultry or the like within the container is frozen. The flap 12 may be adhered or otherwise affixed to the bottom of the container, while the flaps 15, 16 and 17 are either stapled or adhered to each other in a conventional manner. When the poultry has been frozen the flap 12 is folded back around to close the opening at the end of the box, as illustrated in FIGURE 8.

What is claimed is:

1. A method of packaging meat or the like comprising the steps of:

- (a) forming a compartmented container having a first side panel with a solid end closure flap hingedly secured to each end thereof, a pair of end panels each provided with closure flaps on each end thereof, a second and third side panel together forming a side panel equal in size to said first side panel and having end closure flaps hingedly secured to each end thereof, said end panel closure flaps and second and third end closure flaps having substantially rectangular cut-out portions forming an opening therein, a parti-

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tion panel having a reinforcing flap hingedly secured to each end thereof;

- (b) erecting said container and folding said reinforcing flap 180° with respect to said partition panel to extend it towards the center of said container;
- (c) filling said compartmented container with meat;
- (d) folding said cut-out end panel closure flaps 90° with respect to said end panels to form an opening through the end closure flaps by said cut-out portions;
- (e) folding said end closure flaps hingedly connected to said second and third panels 90° with respect thereto to adjacent the closure flaps on said end closure panels to form an opening that is coaxial with said opening through said end closure flaps of said end panels;
- (f) folding said solid end closure flaps 180° with respect to said first side wall panel and underneath the panel;
- (g) securing said end closure flaps on said end panels and said second and third panels together;
- (h) passing said container loaded with said meat into a freezing compartment wherein said cooling medium readily passes into said container through the openings in said closure flaps on said end panels and said second and third panels;
- (i) folding said solid end closure panel on said first side panel to a position to close the openings through the end panels and said second and third panels.

References Cited

UNITED STATES PATENTS

1,151,821	8/1915	Raynaud	229—27
2,757,849	8/1956	Duff	229—15
2,908,436	10/1959	Miller	229—15
2,959,339	11/1960	Sierk	99—174 X
2,983,421	5/1961	Turpin	229—27 X
3,187,980	6/1965	Oas.	
3,352,472	11/1967	Cummings.	
3,135,453	2/1964	Struble	229—15 X

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U.S. Cl. X.R.

99—174; 229—27