May 25, 1965 G. E. STRUBLE 3,185,048

METHOD OF PRODUCING INTERMEDIATE PARTITIONED PANEL CARTON

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FIG. 1

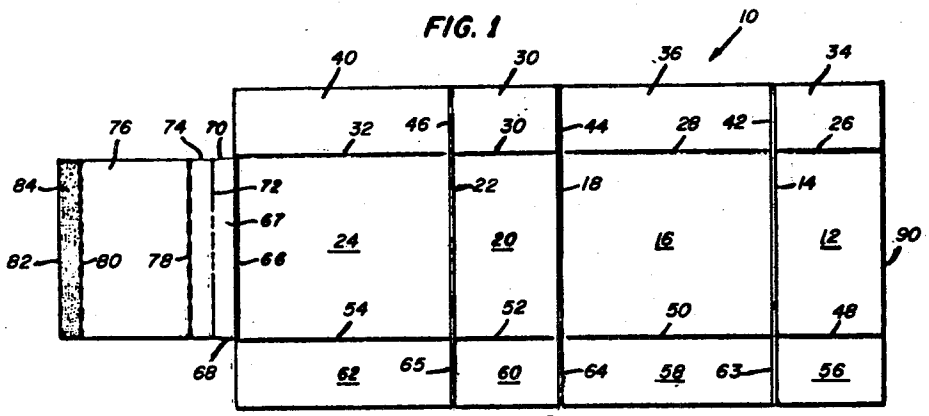


FIG. 2

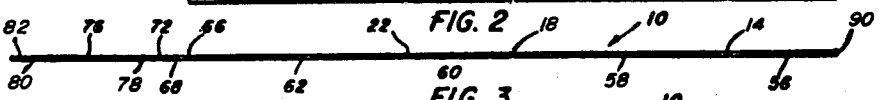


FIG. 3

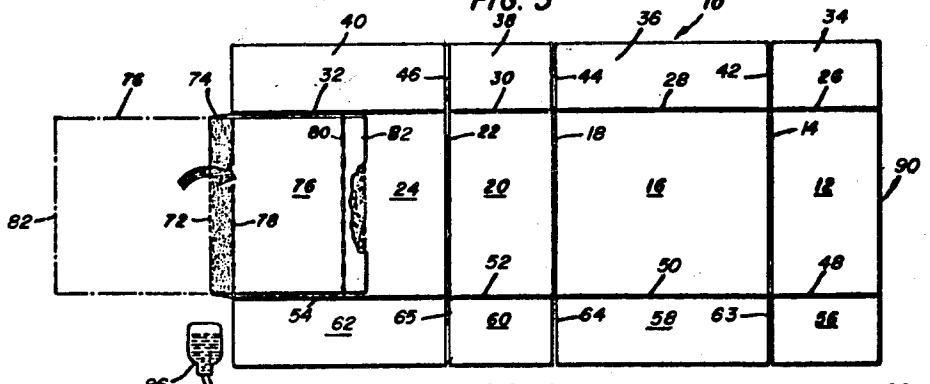


FIG. 4

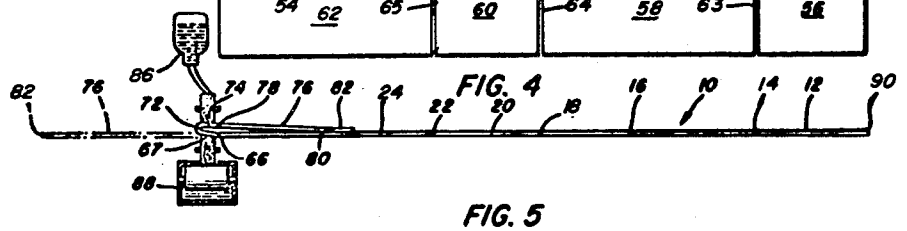


FIG. 5

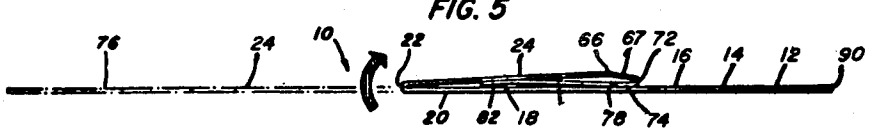
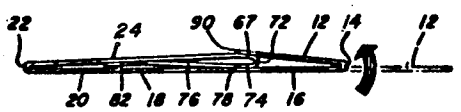


FIG. 6



INVENTOR

Glenn E. Struble

BY Kirk W. Flocks

ATTORNEY

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FIG. 7

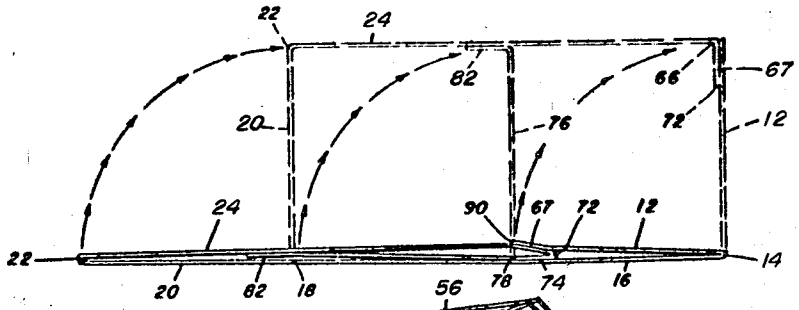


FIG. 8

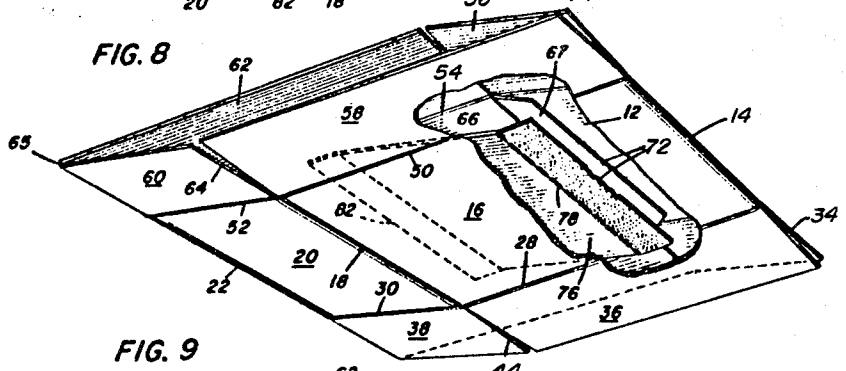
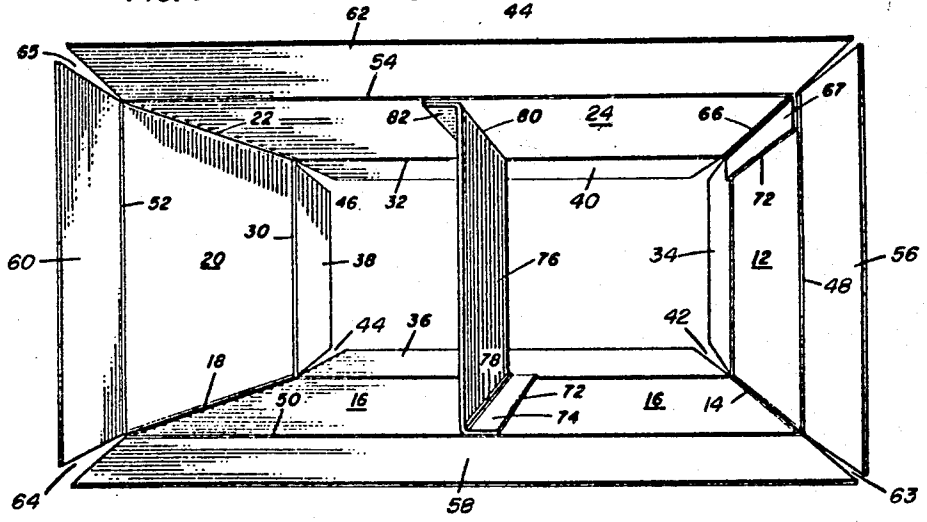


FIG. 9



INVENTOR

Glenn E. Struble

BY Kenneth W. Flocks

ATTORNEY

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METHOD OF PRODUCING INTERMEDIATE PARTITIONED PANEL CARTON

Glenn E. Struble, Hamilton, Ohio, assignor to Diamond International Corporation, a corporation of Delaware

Application Sept. 5, 1962, Ser. No. 221,530, now Patent No. 3,135,453, dated June 2, 1964, which is a continuation of application Serial No. 115,415, June 7, 1961. Divided and this application Nov. 7, 1963, Ser. No. 328,150

5 Claims. (Cl. 93—37)

This application constitutes a division of now-pending application Serial No. 221,530 filed September 5, 1962, now Patent No. 3,135,453 which is a continuation of Serial No. 115,415 filed June 7, 1961, which was abandoned in favor of Serial No. 221,530.

This invention relates generally to partitioned or compartmentized containers of the character especially adapted to hold a plurality of articles or different materials; see for example U.S. Letters Patent to Miessler, Sr., #2,940,653, dated June 14, 1960.

A primary object of this invention is to provide a novel method utilizing a one-piece blank construction and comprising the steps for automatically orienting and positioning a partition panel between opposite sides of a container or carton when the container is being erected.

A further object of the present invention is to provide a novel method of assembling a carton blank to provide a container which, when erected, will incorporate a partition panel affording adjacent compartments in the container.

Another object of the invention is to provide a novel method affording economies in use of material, space used for storage, and a reduction of manipulative steps in the assembly of a partitioned container.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a plan view of a blank used in the invention;

FIG. 2 is a side elevation of the novel blank;

FIG. 3 is a plan view similar to FIG. 1, showing the first step of assembly of the blank;

FIG. 4 is a side elevation of FIG. 3, illustrating the second step of assembly of the invention;

FIG. 5 is a view similar to FIG. 4 showing the next step of assembly of the blank;

FIG. 6 is a view similar to FIGS. 4 and 5 showing the next manipulative step of the blank;

FIG. 7 is a side elevation showing the last manipulative step of the blank;

FIG. 8 is a perspective view of the novel folded partitioned container, portions being broken away for the purpose of showing details; and

FIG. 9 is an end perspective view of the partitioned container erected from the condition shown in FIG. 8.

Referring to the drawings in detail, a substantially rectangular blank of paperboard material or the like is indicated generally at 10 and comprises, in order, a first rectangular end panel 12 hingedly connected by a fold line 14 to a first side panel 16 which is hingedly connected by a fold line 18 to a second end panel 20, which is hingedly connected by a fold line 22 to a second side panel 24. Hingedly connected to the upper marginal edges of the panels 12, 16, 20 and 24, at fold lines 26, 28, 30 and 32, respectively, are top forming flaps 34, 36, 38 and 40, respectively, which are separated by cut lines 42, 44 and 46 which are in alignment with the fold lines 14, 18 and 22, respectively. Hingedly connected to the fold lines 48, 50, 52 and 54, at the bottom of the respective panels 12, 16, 20 and 24, are bottom forming flaps 56, 58, 60 and 62, respectively. The bottom forming flaps 56, 58, 60 and 62, are separated by cut lines 63, 64 and 65, which are respectively in alignment with the fold lines 14, 18 and 22.

Hingedly connected by a fold line 66 at the side margin of the second side panel 24 is a panel including a container-glue flap 67, the opposite ends 68 and 70 of which are tapered slightly away from the fold lines 32 and 54 to dispose the glue flap below the upper and lower margins of the assembled container.

Hingedly connected by a line of separation or foldable tear line 72 is a first partition glue flap 74 extending the length of one margin of a rectangular partition panel 76 and being hingedly connected thereto by a fold line 78. Hingedly connected at the opposite side margin of the partition panel 76 at a fold line 80 is a second partition glue flap 82.

The inner surface 84 of the partition glue flap 82 will have deposited thereon a layer of suitable adhesive material by means of automatic gluing apparatus; see FIG. 1. After this has been accomplished, the partition panel and partition glue flap 74 are folded along the tearable fold lines 72 into juxtaposed relation on the second side panel 24 in the manner shown in FIGS. 3 and 4. After this has been accomplished, glue is applied to the exposed sides of the container glue flap 67 and first partition glue flap 74 which are disposed in juxtaposition, as seen in FIGS. 3 and 4. The glue can be deposited, for example, by means of a conventional, lower glue pot-and-wheel 88 and an upper, glue bottle-and-wheel 86 as seen diagrammatically in FIG. 4, or any other suitable means may be utilized.

After glue has been disposed on opposite sides or outer exposed surfaces of the glue flaps 67, 74, the panel 24, with the partition panel 76 attached thereto, is folded into overlying relationship with respect to the second end panel 20 disposing the glue-applied surface of the glue flap 74 onto an intermediate portion of the first side panel 16, see FIG. 5. After this has been accomplished, the first end panel 12 is folded on the hinge line 14 toward the exposed surface of the glue flap 67 of the container and the marginal edge 90 of the first end panel will be secured in overlying relationship to the container glue flap 67.

It will be noted that the side panels 16 and 24 are of the same dimensions, and the end panels 12 and 20 and the partition panel 76 are of an equal width.

As seen in FIG. 6, the assembled carton is illustrated; however, the tear line 72 is not severed at this time.

The assembled position of the parts is shown in FIG. 7. When the first and second side panels 16 and 24 are disposed in parallel relationship, and the end panels are also disposed in parallel relationship to form a rectangular container, the tear line 72 will be severed, and the partition panel 76 will move to a parallel position with respect to the end panels 12 and 20, see FIGS. 7 and 9. After this has been accomplished, the top and bottom flaps 34–40 and 56–62 may be oriented into their proper position.

Thus it will be noted that through the expedient of constructing a single unitary blank of the character described, a partition panel is provided which is oriented into its proper position of assembly during the erection of the container, this expedient requiring no special manipulative steps, and merely involving a single one-piece blank rather than separate parts comprising the container per se and the partition per se.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. The method of producing a partitioned container having a blank comprising a single sheet of paper product material including, in order, two pairs of rectangular wall

panels secured on parallel hinge score lines for forming opposed walls of a rectangular container, said wall panels of one pair being disposed at opposite side edges of one of said panels of said other pair, one of said panels having hingedly secured along the side edge thereof, in order, a combined container glue-flap and first partition panel glue-flap, a partition panel and a second partition panel glue-flap each connected by hinge lines parallel to the hinge lines of said two pairs of wall panels, said combined container glue-flap and first partition panel glue-flap including an intermediate portion parallel to said hinge lines and forming a separation line between said first partition panel glue-flap and said container glue-flap when said container is erected, said method comprising the steps of:

(*a*) applying an adhesive to the glue-receiving surface of one of said partition panel glue-flaps and folding said partition panel and said one partition panel glue-flap in overlying juxtaposed relation to one of one pair of said wall panels and securing said one partition panel glue-flap thereto;

(*b*) applying an adhesive to the glue-receiving surfaces of said other partition panel glue-flap and said container glue-flap; and

(*c*) disposing the other of wall panel of said one pair of wall panels in juxtaposed relation on the glue-receiving surface of said other partition panel glue-flap and securing it thereto and securing said container glue-flap receiving surface to the marginal edge of said blank opposite that to which the container glue-flap is hinged and having one of each of pairs of said wall panels disposed in alternate, juxtaposed relation with respect to each other.

2. The method of claim 1 including the step of:

(*d*) disposing each of said pairs of wall panels in opposed parallel relation whereby said partition panel extends between one of said pair of spaced parallel wall panels detached from said container glue-flap.

3. The method of producing a partition container having an intermediate partition between opposed side walls from a blank comprising a single sheet of paper product material including in order a first side panel, a second end panel, a second side panel, a second end panel, a container glue-flap, a first partition-panel glue-flap, a partition panel, and a second partition panel glue-flap, said end panels and partition panel being of the same width, mutually parallel fold lines connecting said end panels, side panels and container glue-flap to each other, fold lines connecting said partition panel glue-flaps to said partition panel, said last-mentioned fold lines being parallel to the fold lines connecting the end panels, side panels and container glue-flap to each other, a tear line between said container glue-flap and said first partition panel glue-flap, one side of said container glue-flap and first partition panel glue-flap comprising means for receiving an adhesive material thereon for respective securement to said first end panel and said first side panel when folded in overlying relationship to each other, said second partition panel glue-flap including a glue receiving surface opposite that of the container and first partition panel glue-flaps for securement of the second side panel when the container glue-flap and first partition panel glue-flap are in overlying relationship with respect to each other, said method including the steps of:

(*a*) applying adhesive material to the one side of said second partition panel glue flap;

(*b*) folding said container glue-flap and first partition

panel glue-flap in juxtaposed relation and adhesively securing said second partition panel glue-flap in juxtaposed relation on an intermediate portion of said second container panel;

(*c*) applying an adhesive material to opposite sides of the juxtaposed container and first partition panel glue flap;

(*d*) folding said second side panel over said second end panel and securing said second partition panel glue flap intermediately of said first side panel; and

(*e*) folding said first end panel in juxtaposed relation to said first side panel and adhesively securing the same to the container glue flap.

4. The method of claim 3, comprising the step of:

(*f*) positioning said container end panels at right angles with respect to said container side panels and simultaneously tearing the tear line between said container glue-flap and said first partition panel glue-flap whereby said partition panel is disposed transversely between intermediate portions of said container side panels.

5. The method of forming a carton from paperboard stock which comprises the following steps:

(*a*) forming a blank of said stock having four rectangular hingedly connected side walls with end wall flaps, designed to be set up as a cubic container having two opposed side walls narrower than the other two, and forming on said blank a rectangular web of stock hingedly and detachably connected to and projecting laterally from one side edge of said blank adjacent one of said side walls;

(*b*) forming said web with hinge lines adjacent to side extremities thereof, parallel with respect to one another and the one side edge of said blank and forming a first gluing flap along one edge of said web and a second gluing flap along the opposed edge of said web and a partition element substantially equal in width to the width of the narrower side walls of the carton;

(*c*) applying adhesive to a surface of the first gluing flap and to the opposite surface of said second gluing flap;

(*d*) folding said web inwardly to cause said web to overlie a portion of one of said wider side walls and causing said adhesive coated surface of said first gluing flap to adhere thereto, while exposing the adhesive coated surface of said second gluing flap; and

(*e*) folding the blank inwardly from the edge opposite said web to overlie said web and to cause the remaining overlying wide panel to adhere to the exposed adhesive surface of said second gluing flap and hingedly connecting the free edge of said latter wide panel to one of said narrower panels, whereby said partition is located between the opposed wider walls of said blank to form a transverse partition extending therebetween when said blank is set up to cubic carton form.

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FRANK E. BAILEY, *Primary Examiner.*

BERNARD STICKNEY, *Examiner.*