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CORRUGATED CARTON

Filed March 9, 1950

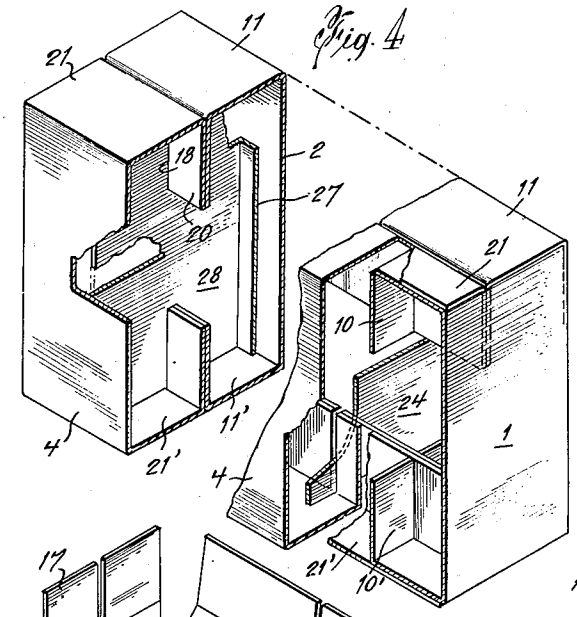


Fig. 4

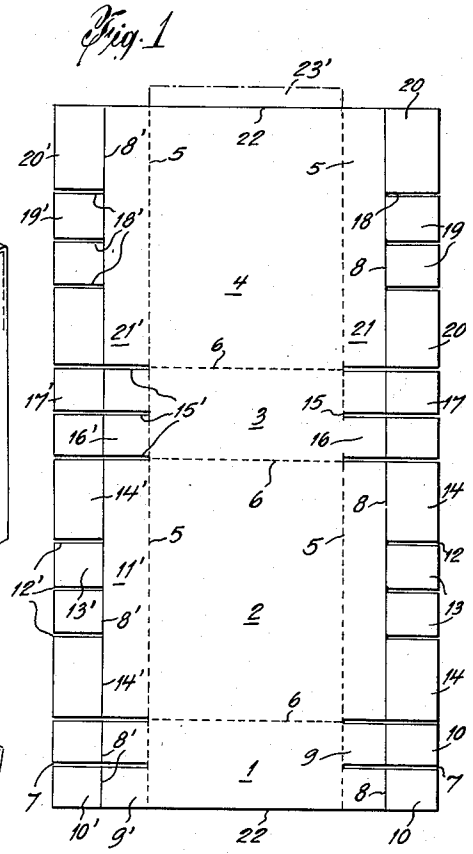


Fig. 1

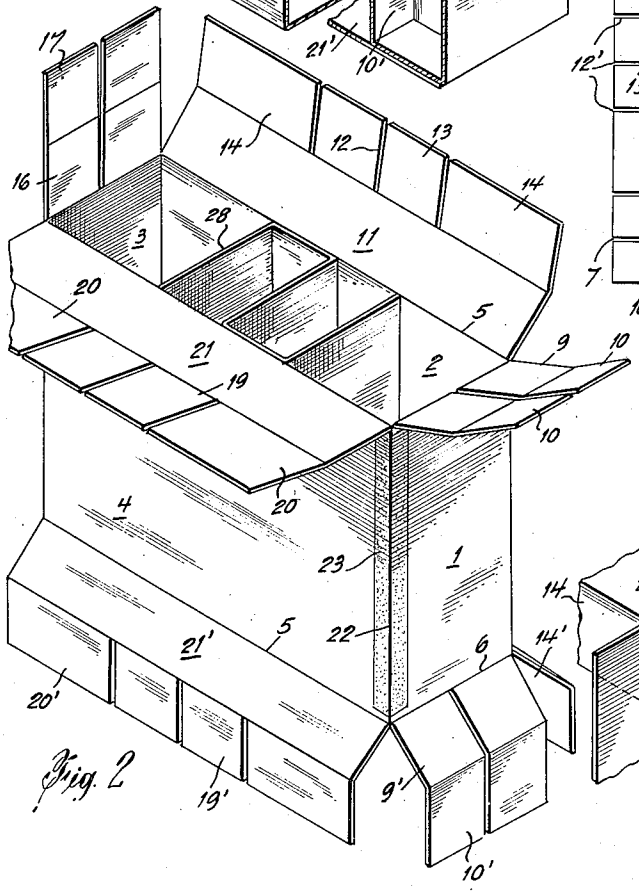


Fig. 2

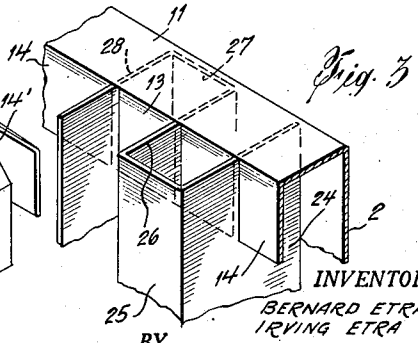


Fig. 3

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CORRUGATED CARTON

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10 Claims. (Cl. 229—38)

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The present invention is directed to cartons, more particularly to cartons made of corrugated paper material and intended to safely hold a plurality of articles, especially of fragile materials.

It has long been customary to provide corrugated boxes or cartons having spacers therein, between which various articles were placed. Such articles were of all types including glass jars, lamps, cans, ceramics and bottles. Such cartons were generally of such size and shape as to carry a considerable number of such articles, the most popular being a set of twelve articles. Because of the necessity for using a number of spacers and because of the necessity for assembling of the various parts to form the completed carton, a considerable expense was involved in such assembly and in the storage of the parts thereof. Also, in shipment of the various elements of the carton, they had to be separated and bundles of various sizes were necessary. Difficulty also arose in stacking of the parts of the carton because of the various shapes and sizes of the parts.

The present invention is intended and adapted to overcome the difficulties and disadvantages inherent in prior structures of the type described, it being among the objects of the present invention to provide a construction of carton which is simple and which contains no more than two parts.

It is also among the objects of the present invention to provide a carton of the type described, which is adapted for use in carrying six articles and up to twelve or more articles on a single level.

It is further among the objects of the present invention to provide a structure of the type described, which may be readily assembled with a minimum of labor, in which the parts may be stacked without difficulty and in which the completed and packed cartons may be stacked to a considerable height without danger of the stack shifting, swaying or tumbling.

In practicing the present invention, there is provided a blank which is substantially rectangular and which is scored both longitudinally and laterally, thereby forming a pair of end panels and alternating therewith, a pair of side panels arranged longitudinally of the blank. All of the panels have transverse extensions thereon along the opposite edges thereof. These extensions are slitted in line with the scoring and the extensions at the end panels are further slitted so as to be bisected. The extensions at the side

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panels have a plurality of transverse slits extending partly down said extensions. The number of such slits determines the number of compartments to be formed. Both of said extensions are scored longitudinally of the blank. There is also provided a spacer which is a rectangular piece of material having a suitable number of scorings transversely thereof, permitting the spacer to be folded in zigzag fashion.

The rectangular blank is folded so that the ends thereof meet and are secured together. Then the bottom members are folded in and the spacer is introduced into the central portion of the carton. Next the top extensions and sections are folded in so as to interlock with the spacer and with each other to complete the carton. Such extensions and sections cooperate with the spacer forming complete compartments, each of which holds an article, and such articles are held tightly against accidental movement due to handling of the carton, and the danger of breakage is thereby minimized.

In the accompanying drawing constituting a part hereof, and in which like reference characters indicate like parts,

Fig. 1 is a plan view of a blank made in accordance with the present invention and adapted to form a carton,

Fig. 2 is a perspective view of the blank of Fig. 1 folded in the initial step of forming the carton, and having the spacer therein,

Fig. 3 is a fragmentary perspective view of the central portion of the top of the carton illustrating the interlocking of the spacer and a top section; and

Fig. 4 is a perspective fragmentary view of a completed carton, some parts being broken away for clearness.

The blank shown in Fig. 1 is scored as shown by the dotted lines to form a series of panels including a relatively narrow end panel 1 and adjacent relatively wide side panel 2, an adjacent end panel 3, and including a side panel 4. These panels are formed by scorings 5 and 6.

End panel 1 is slitted as shown at 7 and scorings 8 and 8' longitudinally of the blank are provided at top and bottom. This forms extensions 9 and 10 at the top and corresponding extensions 9' and 10' at the bottom.

Side panel 2 has extending laterally therefrom a pair of sections at the top and bottom. Said sections include portions 11 and 11' at the top and bottom, produced by scorings 8 and 8', respectively. A series of transverse slits 12 and 12' provide a pair of relatively narrow sections

13 and 13' at the central part of the extending portion and relatively wider sections 14 and 14' on both sides of portions 13 and 13'. In the present case portions 14 are approximately double the width of portions 13 and the latter are approximately the same width as extensions 10.

End panel 3 is provided with transverse slits 15 and 15' forming inner portions 16 and 16' and outer portions 17 and 17', equivalent to corresponding elements in end panel 1.

Side panel 4 is constructed similarly to side panel 2 and is provided with transverse slits 18 and 18', forming relatively narrow central sections 19 and 19' and relatively wide adjacent sections 20 and 20'. Portions 21 and 21' are equivalent to portions 11 and 11' of panel 2.

Ends 22 of the blank are adapted to meet when the blank is folded along scorings 6 to form a rectangular carton. Ordinarily the junction is sealed by adhesive tape 23. However, there may be provided an integral tongue 23' which when the blank is folded will contact the inner face of end panel 1 and form a seal.

The spacer is formed by transverse scorings into a wall 24 which forms a partition, a connecting section 25 which merges into a second wall 26 and which determines the width of a central compartment. The end of wall 26 merges into portion 27 which in turn is merged into wall 28. Portion 27 determines the width of the compartment formed by walls 26 and 28.

In assembling the carton the blank is folded as shown in Fig. 2 and tape 23 secured along ends 22. The spacer 24—28 is inserted centrally thereof. The bottom of the container may then be formed by folding in members 9'—10' and 16'—17', after which sections 11' and 21' are folded in so that portions 14' and 20' thereof enter into slits 7 and 15'. Thereby the end compartments of the carton are each divided into four sub-compartments adapted to hold four containers and the center is divided into four sub-compartments by the zigzag member. The cartons are then supplied with the articles and the top extensions and sections are folded in respectively. It will be noted that portions 13 straddle walls 24, 26 and 28 and thus firmly lock all of the elements into position.

Although the invention has been described setting forth a single specific embodiment, it is understood that various additional changes in the details of construction may be made within the principles herein set forth, as for instance, in the size, shape and character of the several elements and the materials used. The invention is, therefore, to be broadly construed and to be limited only by the character of the claims appended hereto.

We claim:

1. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

2. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely to bisect the same, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

3. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally to bisect the same, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each

of them into a plurality of compartments for said containers, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

4. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said transverse slits forming sections of various widths, the central sections being narrower than the outer ones, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

5. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said transverse slits forming two central sections and two outer ones, the central sections being about one half the width of the outer ones, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

6. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, said spacer being substantially rectangular and being scored transversely and folded to form a plurality of internal walls, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

7. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said ends spaces to divide each of them into a plurality of compartments for said containers, said spacer being substantially rectangular and being scored transversely and folded to form a plurality of internal walls, said end extensions terminating short of said spacer, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

8. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions

of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, said spacer being substantially rectangular and being scored transversely and folded to form a plurality of internal walls, said side extensions adapted to interlock with the ends of said walls, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

9. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, said spacer being substantially rectangular and being scored transversely and folded to form a plurality of internal walls, said wider sections of the side extensions adapted to interlock with the end extensions, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

10. A carton comprising a substantially rectangular blank, said blank being scored longitudinally and laterally to form alternate end and side panels, said panels having a series of transverse extensions thereon along opposite edges thereof, said extensions being slitted in alinement with said lateral scorings, the extensions of said end panels being slitted transversely, all of said extensions being scored transversely longitudinally, said side panels having a plurality of transverse slits extending from the edge to the scoring thereof, said slits being in the central portion only of said side panels and adapted to engage a zigzag spacer, said blank being folded with the opposite ends thereof in contact, one set of extensions on one side of said blank being folded in to form the bottom of said carton and the other set being folded in to form the top of said carton, the slitted ends of said extensions constituting separators for containers held in said carton, a tongue along one end of said blank, said tongue being bent and held within said carton, and an upstanding spacer of zigzag form in the center of said carton, said zigzag spacer terminating short of the ends of said carton to provide end spaces, the slitted ends of said side panels interlacing with the ends of said spacer, the ends of the extensions of said end panels fitting into said end spaces to divide each of them into a plurality of compartments for said containers, the extensions of said opposite edges when said carton is closed being in alinement and being spaced apart a substantial distance while forming a series of compartments.

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