Aug. 4, 1959 C. W. SHERMAN 2,898,029

HANDLED CARTON

Filed July 19, 1956 2 Sheets-Sheet 1

FIG. 1

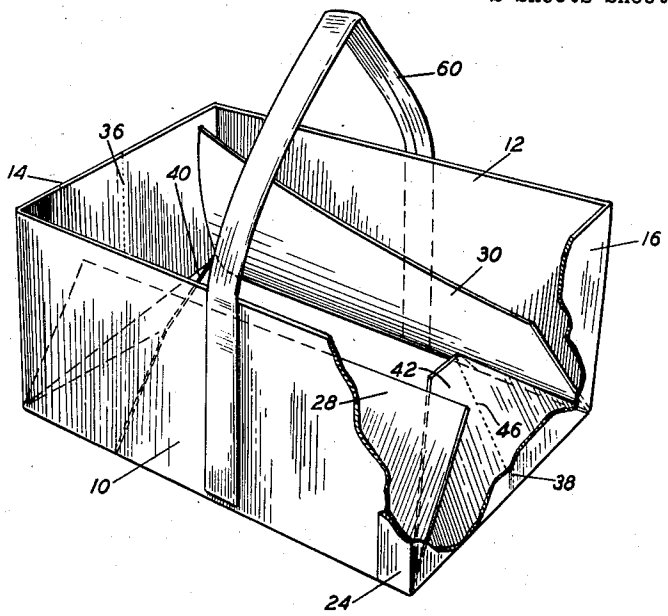


FIG. 2

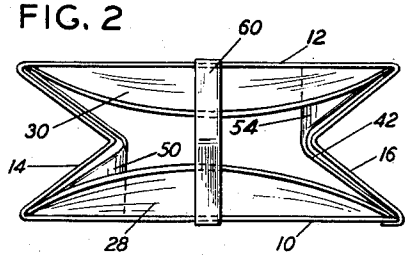
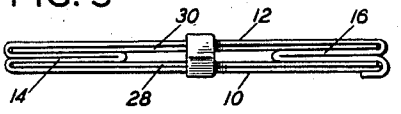


FIG. 3



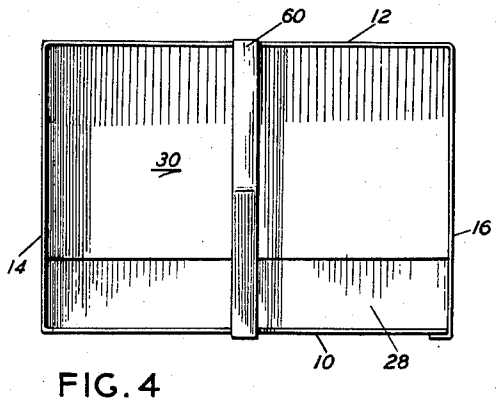


FIG. 4

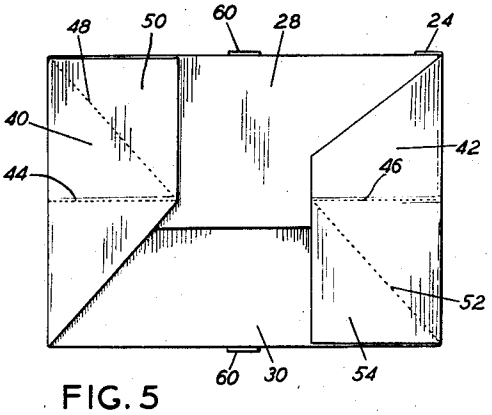


FIG. 5

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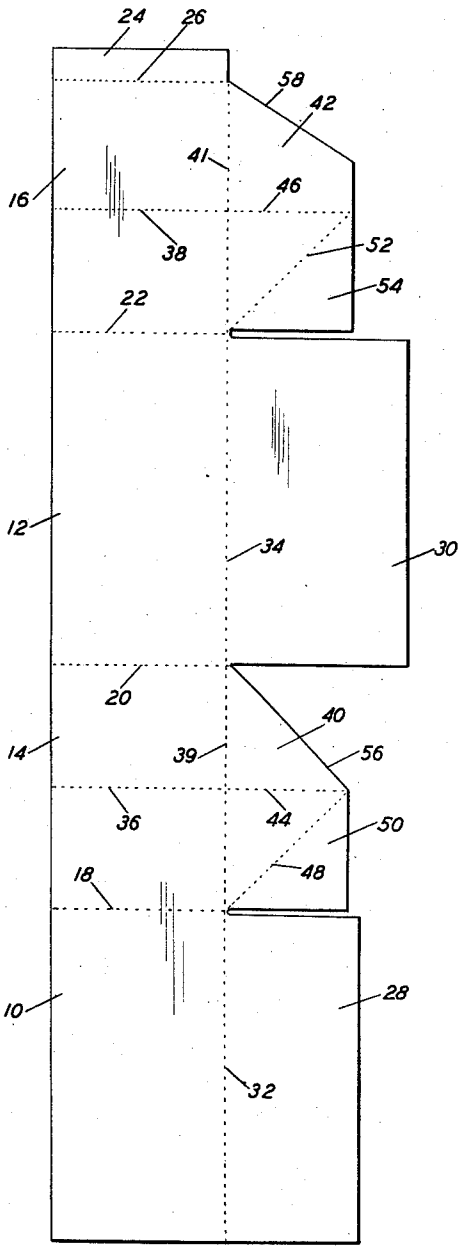


FIG. 6

FIG. 7

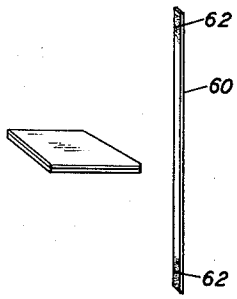
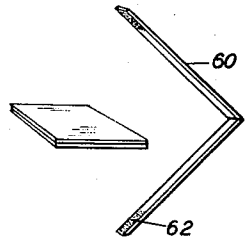


FIG. 8



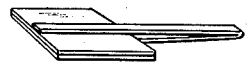


FIG. 9

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HANDLED CARTON

Clark W. Sherman, Scappoose, Oreg.

Application July 19, 1956, Serial No. 598,799

6 Claims. (Cl. 229—41)

The present invention relates to a foldably erectable carton and more particularly to a foldably erectable handled carton.

It is advantageous in "self-service" grocery stores and the like to display such merchandise as small fruits and vegetables in prepacked cartons which the purchaser may pick up. It has been found that if such cartons are provided with handles by which they may be carried, sales are increased impressively over the number of sales made of similar cartons without handles. Accordingly, many attempts have been made heretofore to provide handled cartons which may be used for the purpose set forth above. Certain of these prior cartons had to be shipped erected and required an excessive amount of shipping space. Others were difficult to erect and required so much time of the personnel to erect and load that they were economically unfeasible. Other quickly erectable cartons were not suitable to have handles provided thereon.

It is, therefore, a principal object of the present invention to provide a carton which may be shipped in a flat, folded condition with a handle attached thereto and which may be quickly and easily erected.

It is another object of the invention to provide a quick opening carton of the type described adapted to have handles attached thereto by fast operating, automatic machines.

Other objects and advantages of the invention will become more apparent hereinafter.

In accordance with the illustrated embodiment, the present invention comprises a carton made of a single sheet of paperboard or the like having two opposite side walls to which are attached the opposite ends of a handle which extends over the open top of the carton. Extending between the side walls are opposite end walls scored so that the carton may be collapsed by folding the end walls inwardly between the side walls as the latter are moved directly towards one another so that in the collapsed condition of the carton the side walls are substantially coextensive with one another. Bottom panels extend from each of the side walls and flaps extend from the end walls secured to the bottom panels in such fashion that upon pulling the end walls outwardly, the side walls are moved apart and the end flaps are moved downwardly to pull the bottom flaps into a flat, horizontal position.

For a more detailed description of the invention, reference is made to the accompanying drawings and the following detailed description thereof.

In the drawings,

Fig. 1 is a perspective view partly broken away showing the carton in the last stages of erection;

Fig. 2 is a top plan view on a reduced scale of the carton of the invention in a partially erected condition;

Fig. 3 is a top view of the completely collapsed carton;

Fig. 4 is a top plan view of the erected carton;

Fig. 5 is a bottom plan view of the erected carton;

Fig. 6 is a plan view of the cut and scored carton blank;

Fig. 7 is a diagrammatic view illustrating the initial step in the method of attaching the handle to the carton;

Fig. 8 is a further diagrammatic view illustrating an intermediate step in the attachment of the handle to the carton; and

Fig. 9 is a diagrammatic view showing the flat, collapsed carton with the handle attached thereto and ready for shipment to the consumer.

The carton of the invention is particularly adapted to be formed from sheet stock of paperboard, cardboard or the like cut and scored to form a blank as illustrated in Fig. 6. The carton is rectangular in shape and, referring to Figs. 1 and 6, comprises two opposite side walls **10**, **12** and interconnecting end walls **14**, **16**. In the carton as illustrated, the end wall **14** is positioned between the side walls **10**, **12** and separated therefrom by score lines **18**, **20**, respectively. The end wall **16** is positioned on the opposite side of the side wall **12** and is separated therefrom by a score line **22**. Extending from the opposite edge of the end wall **16** is a glue flap **24** which is foldable along a score line **26** into overlapping engagement with the side wall **10**, as shown in Fig. 1.

Integral with and extending one from each of the side walls **10**, **12** are bottom panels **28**, **30**, respectively. The panel **28** is foldable upwardly against the inner side of the wall **10** along a score line **32**, and the bottom panel **30** is similarly foldable upwardly against the side wall **12** along a score line **34**, as may be seen in Figs. 1 and 2. The bottom panel **28** has a width slightly greater than half the width of the end walls **14**, **16**, while the bottom panel **30** preferably has a still greater width, for a purpose to be made clear hereinafter.

The end wall **14** is provided with a score line **36** medially between and parallel to the score lines **18**, **20** along the opposite edges thereof, and the end wall **16** is provided with a score line **38** medially between and parallel to the score lines **22**, **26**, along the opposite edges thereof.

Connected to the lower edges of the end walls **14**, **16** along fold lines **39**, **41**, respectively, are the generally triangular base sections of flaps **40**, **42**, respectively, the base of each of the flaps being substantially coextensive with the corresponding wall. The flap **40** is provided with a score line **44** formed as an extension of and parallel to the score line **36** in the end wall **14**. Similarly, the flap **42** is provided with a score line **46** formed as an extension of and parallel to the score line **38** of the end wall **16**.

Extending from one side edge of the base section of the flap **40** and hingedly connected thereto along a score line **48** is a glue tab **50**. Extending from a side edge of the base section of the flap **42** and hingedly connected thereto along a score line **52** is a glue tab **54**. As best shown in Figs. 1 and 5, the glue tab **50** is secured by suitable adhesive to the bottom surface of the bottom panel **28** while the glue tab **54** is secured to the bottom surface of the bottom panel **30**.

It will be noted that the free side edge **56** of the flap **40** intersects the score line **44** at the intersection of the latter with the fold line **48**, whereas the free side edge **58** of the flap **42** is spaced from the point of intersection of the fold line **52** and score line **46**. This preferred construction of the flap **42** gives it greater width and hence gives more support to the bottom of the carton. As will be known to those skilled in the art, the above noted construction of the flap **40** is required to permit the carton blanks to be glued and collapsibly folded upon the presently available automatic gluing and folding machines.

Extending over the open top of the carton is a handle **60** which preferably comprises a length of edge folded paper strap having its opposite ends suitably secured,

such as by gluing to the outer surface of the side walls **10**, **12** medially between the opposite ends thereof.

As may be seen in Figs. 2 and 3, the carton is adapted to be collapsed into a flat, folded condition with the side walls **10**, **12** coextensive to one another by folding the bottom panel **30** upwardly against the side wall **12** and the bottom panel **28** upwardly against the side wall **10**. The end walls **14**, **16** are folded inwardly along the score lines **36**, **38**, respectively, and the end flaps **40**, **42** are folded upwardly and between the side walls and bottom panels **28**, **30**.

Referring to Figs. 7, 8 and 9, an advantage of the cartons of the invention resides in the fact that the flat, folded cartons are adapted to have the handle **60** attached thereto quickly and inexpensively such as by the apparatus and method of Grant's Patent No. 2,635,510. In accordance with that patent, the flat, folded cartons are fed with a continuous movement, top end first, in the direction indicated in Fig. 7, toward a length of paper strap **60** previously severed from the supply roll and having opposite end portions **62** coated with a suitable adhesive. As the carton approaches the strap **60**, the latter is doubled upon itself, as indicated in Fig. 8, with the adhesive coated surfaces facing the carton. The carton is carried along and fed between the ends of the strap **60** simultaneously with the folding of the latter so that by the time the folding of the strap upon itself is completed, the opposite end portions of the handle strap engage with the opposite outer surfaces of the side walls **10**, **12** of the carton, as illustrated in Fig. 9. Pressure is then applied upon the assembly and maintained until the adhesive has set.

The handled cartons are shipped flat folded in the condition shown in Figs. 3 and 9 to the consumer, such as a grocer, who may erect the individual cartons quickly and easily by simply pulling out the end walls **14**, **16** of the collapsed carton. This causes the side walls **10**, **12** to move apart and the end flaps **40**, **42** to fold downwardly toward a flat, horizontal position. Since the flaps **40**, **42** are secured by the glue tabs **50**, **54** to the bottom panels **28**, **30**, respectively, the bottom panels will be pulled downwardly towards the flat, horizontal position simultaneously as the end walls are pulled out. The bottom panel **28** is preferably of lesser width than the panel **30** as previously described so that the panel **28** will fold smoothly beneath the panel **30**. Thus, the carton may be opened ready to be filled by pulling out the end walls **14**, **16** in a single, quickly executed movement.

Because of its design, the handled carton may be manufactured and sold at a minimum of cost and a minimum of time is required in erecting the carton, making it feasible for grocers and the like to use the same.

Having illustrated and described a preferred embodiment of the invention, it should be apparent to those skilled in the art that the invention permits of modification in arrangement and detail. I claim as my invention all such modifications as come within the true spirit and scope of the appended claims.

I claim:

1. A collapsed, foldably erectable carton comprising a pair of opposite side walls and a pair of opposite end walls connected along parallel fold lines, said end walls each having a fold line medially between and parallel to the opposite edges thereof and being infolded between said side walls, and said side walls being coextensive with one another, a bottom comprising two panels formed as extensions one to each of said side walls, and two flaps formed as extensions one to each of said end walls, said flaps being infolded upwardly against the respective end wall and between said bottom panels, and means fixedly attaching said flaps one to each of said panels so as to cause a panel and corresponding flap to fold downwardly together, whereby drawing of said end walls outwardly causes said flaps and bottom panels simultaneously to fold downwardly toward a flat horizontal position.

2. A carton as set forth in claim 1 having a handle comprising a length of strap folded medially upon itself, the opposite ends of said strap being secured one to each of said side walls.

3. A rectangular carton formed of paperboard or like stiff material, said carton comprising a pair of non-folding side walls and a pair of end walls having score lines to permit the same to infold between said side walls, and said side walls to be collapsed coextensively with one another, a pair of rectangular bottom panels integral one with each of said side walls along the lower edge thereof and foldable upwardly against the corresponding side wall, a pair of flaps integral one with each of said end walls and extending on each of the opposite sides of said end wall score lines, each of said flaps having a score line formed as an extension of and parallel to the respective said end wall score line and being foldable upwardly against the corresponding end wall as it is infolded between said side walls, and means fixedly attaching said flaps to the bottom surface of said panels whereby said flaps and said panels are pulled downwardly as said end walls are pulled outwardly as aforesaid.

4. A collapsed, foldably erectable carton comprising a one-piece blank cut and scored to form a pair of opposite side walls and a pair of opposite end walls connected along parallel fold lines, said end walls each having a fold line medially between and parallel to the opposite edges thereof and being infolded therealong between said side walls, said side walls being coextensive with one another, a bottom comprising two panels formed as extensions one to each of said side walls, said panels being infolded against the corresponding side wall, two flaps formed as extensions one to each of said end walls and extending on each of the opposite sides of the fold line of the corresponding end wall, said flaps each having a score line formed as an extension of and parallel to the respective end wall score line said flaps being folded against the corresponding end wall and between said panels, each of said flaps having a tab extending therefrom, and means attaching said tabs to the bottom surface, one to each of said panels, whereby pulling said end walls outwardly causes said flaps and said panels to be pulled toward a flat, horizontal position.

5. A foldably erectable carton comprising a one-piece blank cut and scored to form a pair of opposite side walls and a pair of opposite end walls connected along parallel fold lines, said end walls each having a fold line medially between and parallel to the opposite edges thereof, and a bottom comprising two panels formed as extensions one to each of said side walls and two flaps having generally triangular base sections formed as extensions one to each of said end walls, said panels being rectangular and having a length equal to that of the side walls and a width slightly greater than half of the width of the end walls, said flaps each including a base coextensive with the corresponding end wall, each of said flaps having a score line formed as an extension of and parallel to the respective said end wall score line, each of said flaps having a glue tab integral with and foldable along one side edge of the flap, said tabs being secured one to each of said panels on the bottom surface thereof, said carton being disposed in a flat, collapsed state with said side walls coextensive one another, and with said end walls, panels and flaps infolded between said side walls, whereby by drawing said end walls outwardly said panels and flaps will fold downwardly into flat horizontal bottom closing position.

6. A collapsible carton comprising a one-piece blank cut and scored to form a pair of opposite side walls and a pair of opposite end walls connected along parallel fold lines, said end walls each having a fold line medially between and parallel to the opposite edges thereof, and a bottom comprising two panels formed as extensions

one to each of said side walls and two flaps formed as extensions one to each of said end walls, said panels each being rectangular and having a length equal to that of the side walls and a width slightly greater than half of the width of the end walls so that one slightly overlaps the other, said flaps each including a triangular base section coextensive with the corresponding end wall and having an apex substantially at the center line of the carton, each of said flaps having a score line formed as an extension of and parallel to the respective said end wall score line, each of said flaps having a glue tab integral with and foldable along one side edge of the flaps, said tabs being adhesively secured one to each of said panels, whereby said carton may be collapsed with said side

walls coextensive one another, and with said end walls, panels and flaps infolded between said side walls, and a strap handle extending over the top of said carton, the opposite end portions of said handle being secured to the outer surface of said side wall medially between the ends thereof.

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