April 26, 1955 S. PASJACK 2,706,935

CARTONS AND METHOD OF MAKING AND ASSEMBLING SAME

Filed Jan. 5, 1953

Fig. 1

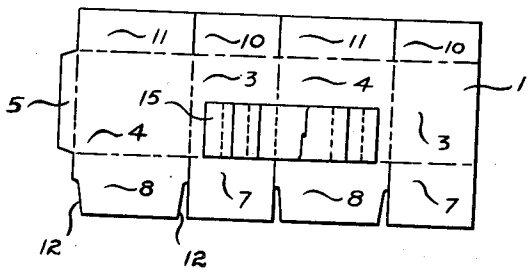


Fig. 2

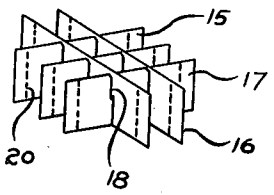


Fig. 3

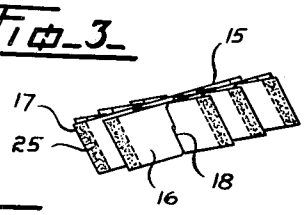


Fig. 4

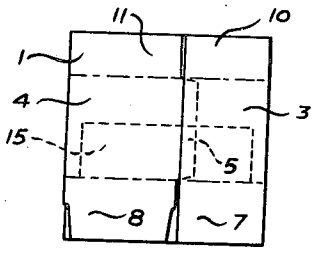


Fig. 6

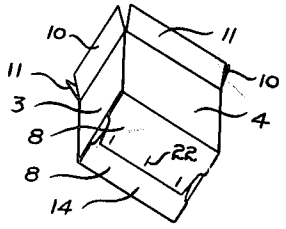


Fig. 5

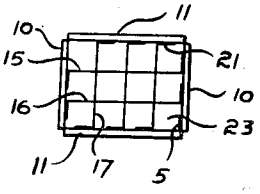


Fig. 8

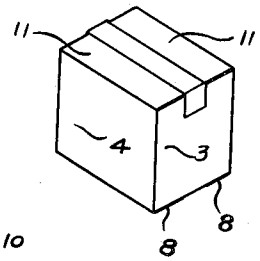


Fig. 9

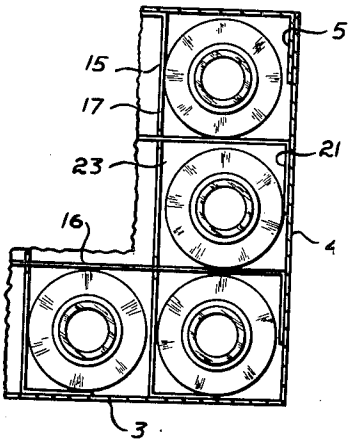
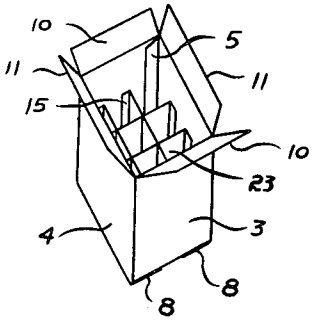


Fig. 7



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CARTONS AND METHOD OF MAKING AND ASSEMBLING SAME

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3 Claims. (Cl. 93—37)

My invention relates to imrovements in cartons and method of making and assembling same.

The primary objects of the invention are to provide a carton having an integral part attached thereto provide said carton with spaced walls dividing it into compartments; to provide means whereby the user can quickly convert the knockdown carton into an open carton ready to receive merchandise such as bottled goods, and to provide that the dividing material will serve to strengthen the body of the carton and support most of the articles carried, so that the weight of any one article may not be carried by any other similar article packed within the carton. A still further and important object of the invention is to provide a carton that will withstand several fillings with goods and still be neat and strong enough for refilling. The objects of the invention are also to provide the minimum handling of blanks for making the carton into a single flattened member, which may be shipped as such to the purchaser to be knocked into shape by the packer spreading the carton body and dividing wall structure into compartments by a single hand movement, and provide further that the stapling of the bottom and top folds may be accomplished expeditiously by the packer, as will be more clearly described in the following specification.

Referring to the accompanying drawings:

Figure 1 is a plan view of the blank from which the carton body is made.

Figure 2 is a perspective view of the filler or the carton dividing wall structure.

Figure 3 is a perspective view of the filler collapsed and ready for placement onto the carton blank.

Figure 4 is a plan view showing one end and one side portion folded over the filler with a corner lap of said side portion disposed beneath said end portion.

Figure 5 is an end view of the carton and its filler squared up prior to infolding the carton bottom flaps.

Figure 6 is a perspective view showing the bottom flaps folded and stapled.

Figure 7 is a perspective view showing the carton open for mechanical or hand filling.

Figure 8 is a perspective view of the filled and closed carton.

Figure 9 is a fractional sectional view of the carton showing the manner in which each of the articles carried is separately supported by a dividing wall or a carton side when the filled carton is standing on one of its sides.

In the drawings like characters of reference indicate corresponding parts in each figure.

The numeral **1**, see Figure 1, indicates a blank of sheet material divided by crease lines and incisions to form end and side walls **3** and **4** respectively, a corner lap **5**, bottom end and bottom side infolds **7** and **8** respectively, and top end and side cover folds **10** and **11** respectively. A corner portion **12** is cut away from the sides of the bottom side infolds **8** to provide convenient entry to the sole plate of a stapling machine when closing the bottom **14** of the assembled carton.

The numeral **15**, see particularly Figure 2, is a filler consisting of longitudinal strips or walls **16** and transverse strips or walls **17**, all of which strips are slotted to one half their depth as at **18** to enable them to be interfitted in the usual way and allow said filler to be collapsed as shown in Figure 3. The end portions of each of the strips **16** and **17** are provided with perforations or crease lines **20** to facilitate forming a right angularly bent portion **21**, each of said portions being adapted to extend

at least one-half the width of an article receiving section **23**. These portions provide added thickness to that part of the carton wall to which it is to be attached and which comes into contact with a side surface of the bottle or other article packed in said carton, as shown in detail in Figure 9. Each portion **21** of the filler strips **16** and **17** is coated on its wall contacting side with adhesive as at **25**, which coating is preferably done by a mechanical process, to all of said portions **21** of a filler **15** when said filler is collapsed as shown in Figure 3 and said filler is then placed upon a blank **1** as shown in Figure 1. The placement of the filler is on one end wall **3** and an adjoining side wall **4**, so that the under sides of the portions **21** of the longitudinal strips **16** will be secured to the above mentioned end wall **3** and similar portions of the transverse strips will adhere to the adjoining side wall **4**. The outer face of the tab **5** is likewise coated with adhesive, so that when the filler **15** with its portions **21** adhesive coated is placed upon the blank **1** the right and left hand free end portions of the blank are folded over the centre portion and the filler **15**, so that the free edge of the right hand blank portion is brought into adhering contact with the tab **5** and the adhesive coated portions **21** of the filler which are uppermost upon the blank become united with their associated side and end walls **4** and **3**. The thus folded carton blank and its inserted filler, as shown in Figure 4, is then passed through suitable pressing equipment to ensure proper adhesion between the adhesive coated parts and is then ready for storage or for delivery to the producer of the goods to be packed therein.

The cartons are received by the packer in flat form and are pressed into open or rectangular form as shown in Figure 5 and the bottom end and bottom side infolds **7** and **8** are folded in their respective order, the bottom side infolds being stapled together as at **22** and as shown in Figure 6 by any approved stapling device. The above step completes the carton ready for filling, which may be done manually or by a mechanical filling device as desired.

It will be observed that the filler **15** is placed on the carton blank **1** in line with the intersection of the carton side and bottom portions, so that when the carton is opened to box form the sections **23** are rectangular in plan and the filler is resting firmly on the bottom of said carton, all wall portions of the sections will be held perfectly straight, so that when bottles or the like are being packed, either manually or by mechanical means, said articles will enter their individual sections **23** without disaligning or damaging any filler member and the filling can be carried out at a rapid rate. The carton when packed is closed in the usual way by folding over the packaged goods the top end and side cover folds **10** and **11** and applying lengthwise of the free edges of the side cover folds an adhesive tape or other fastening means.

It will be noticed that by making the portions **21** of the filler strips **16** and **17** more than half the horizontal width of any of the sections **23**, the material of the free end of the portion serves as an added protection to the article packed from external impact to the carton side or end walls and it will also be apparent that since all intervening strip portions between the sides of all sections **23** are firmly united with other strip parts or carton wall parts that when a carton is laid on its side or end, the weight of each bottle will be entirely carried by the carton or its filler and that the weight of one bottle cannot be carried by a bottle placed vertically therebelow.

What I claim as my invention is:

1. The method of forming a carton body with a lattice type filler which consists of the following consecutive steps, first placing a filler folded into a flat structure with the ends of some of its strips coated with adhesive upon a sheet material blank fully extended and having side and end areas defined by fold lines, said filler being placed with the ends of some of its strips to register with a carton body side area and the ends of others of the strips in register with a body end area, subsequently folding the parts of the carton body extending beyond the flat filler structure inwardly to cover said filler, binding the free inturned edges of the carton body blank to each other

and pressing the carton body blank into firm contact with end portions of the strips of the filler.

2. The method of forming a carton with an integral filler therein which consists of laying out a carton blank in unfolded position, taking a filler having longitudinal and transverse strips interconnected together to form a lattice filler, applying adhesive to the free ends of some of the strips, collapsing the filter into a flat structure, placing said flat structure onto the unfolded blank, folding free opposite extremities of the carton blank onto the adhesive coated filler strip ends to unite the filler to the interior of the carton and bonding the free extremities of the carton blank together.

3. The method of forming a carton with an integral filler therein which consists of laying out a carton blank in unfolded position, taking a filler having longitudinal and transverse strips interconnected together to form a lattice filler, applying adhesive to the free ends of some of the strips, collapsing the filler into a flat structure, placing said flat structure onto one end and one side portion of the carton blank, folding the other end and side portion of the carton blank onto the adhesive coated filler strip ends to unite the filler to the interior of the carton and bonding the free extremities of the carton blank together.

References Cited in the file of this patent

UNITED STATES PATENTS

1,120,752	Smiley	Dec. 15, 1914
2,324,757	Botley	July 20, 1943
2,448,795	Greeco	Sept. 7, 1948