Dec. 12, 1967 S. A. AQUINO ETAL 3,357,542

WARDROBE CARTON AND METHOD OF ASSEMBLY OF HANGER BAR INTO CARTON

Filed Dec. 28, 1966 3 Sheets-Sheet 1

Fig. 1.

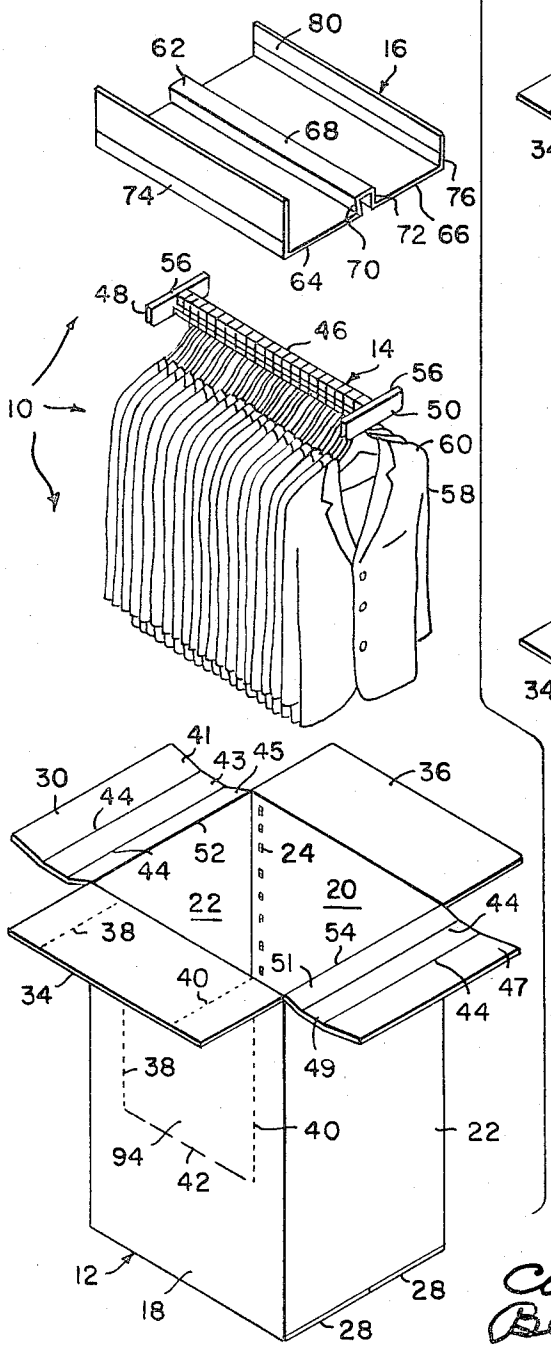
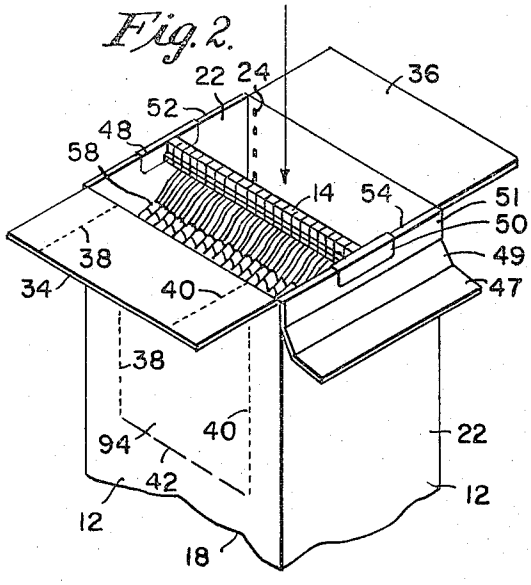


Fig. 2.



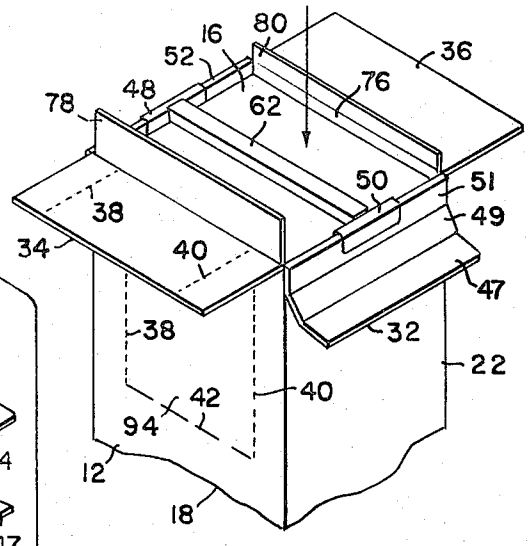


Fig. 3.

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WARDROBE CARTON AND METHOD OF ASSEMBLY OF HANGER BAR INTO CARTON

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Fig. 4.

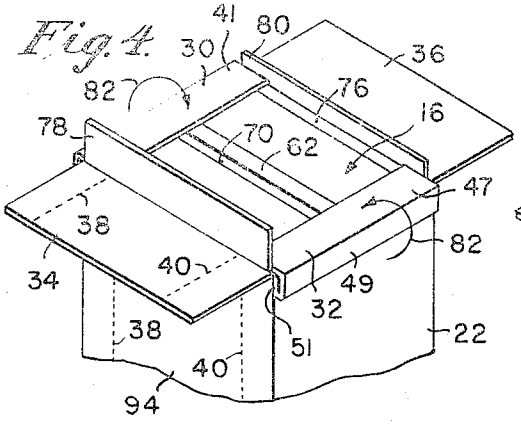


Fig. 5.

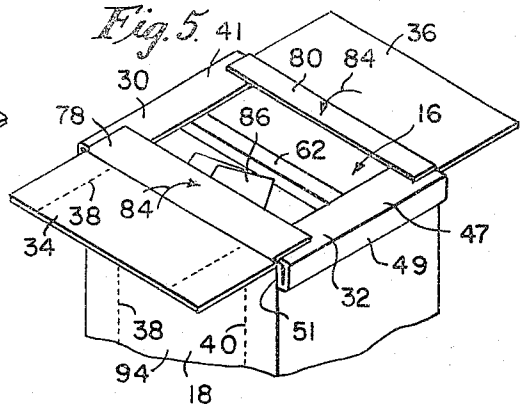


Fig. 6.

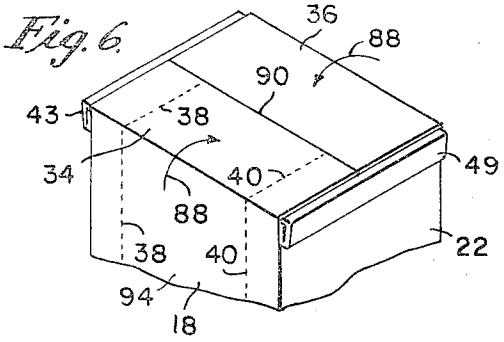


Fig. 7.

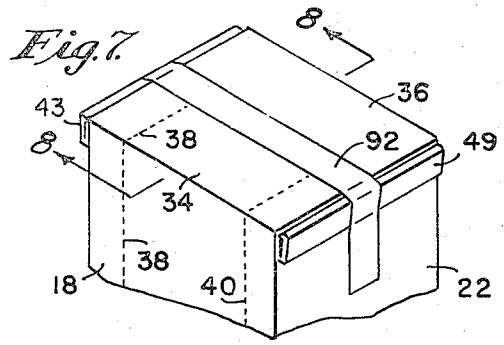


Fig. 8.

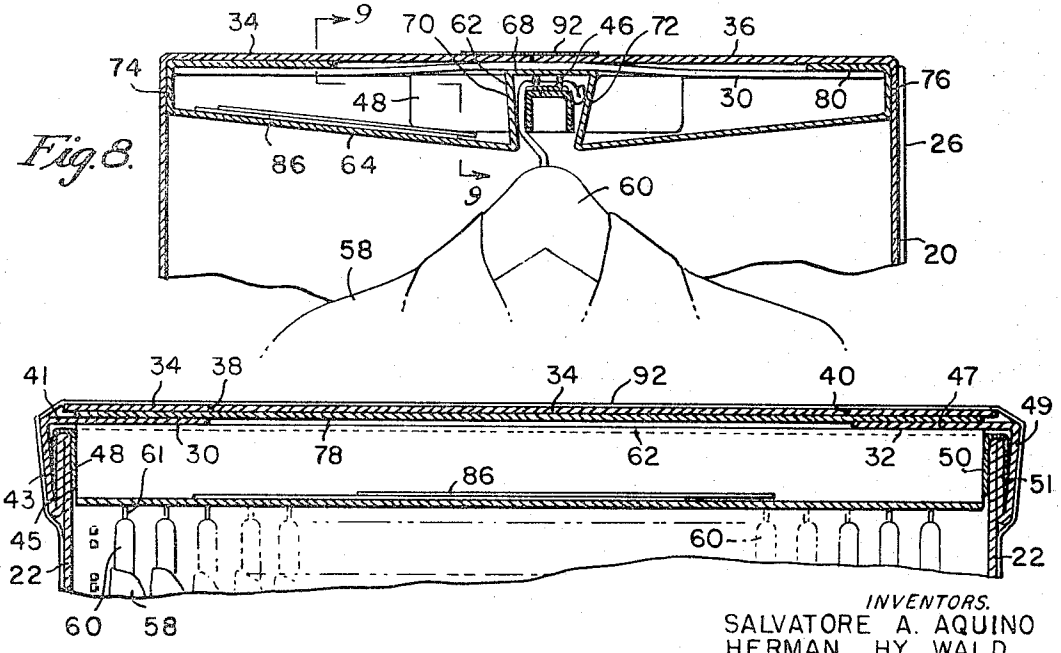


Fig. 9.

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WARDROBE CARTON AND METHOD OF ASSEMBLY
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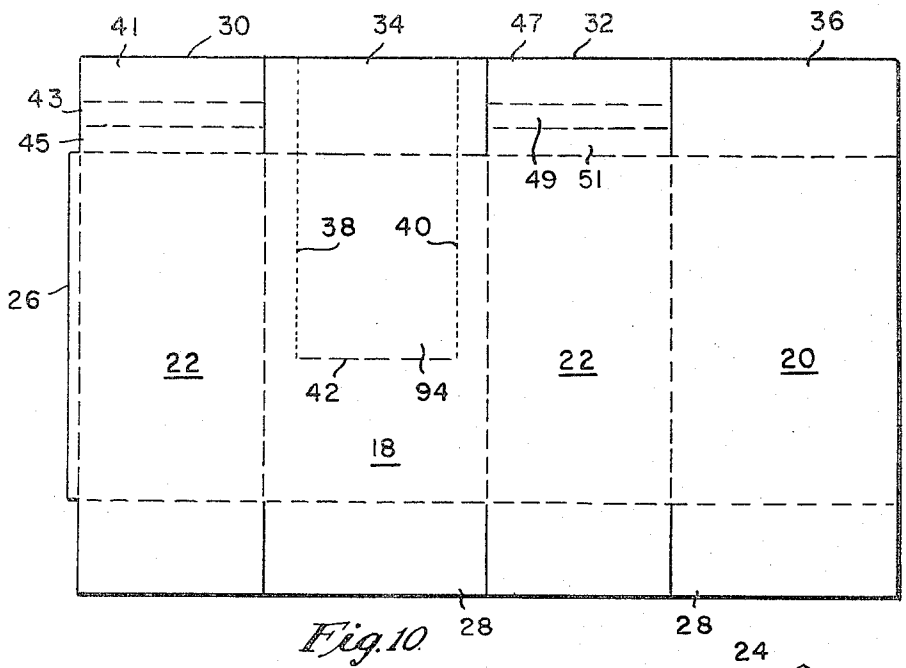


Fig. 10

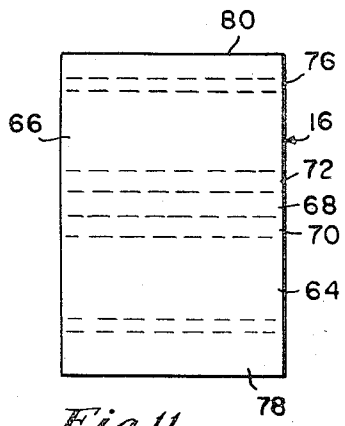


Fig. 11

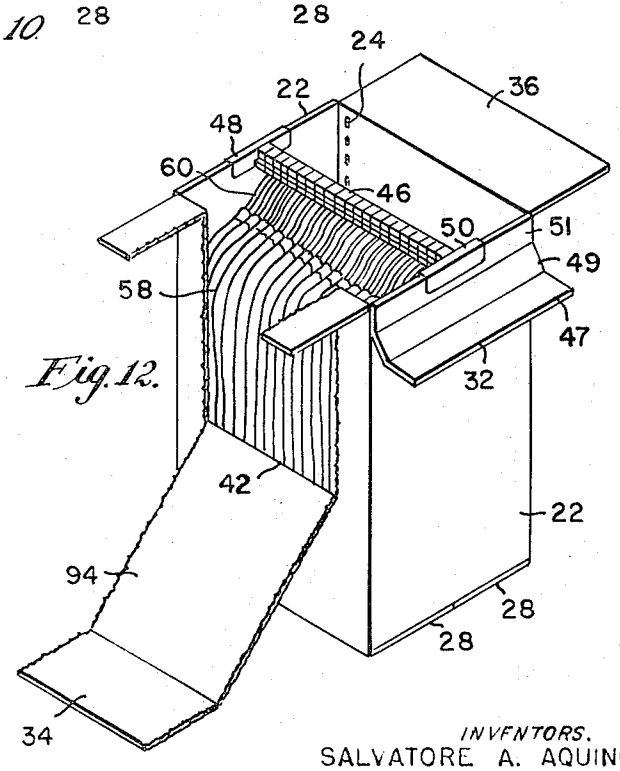


Fig. 12.

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United States Patent Office

3,357,542

Patented Dec. 12, 1967

3,357,542

WARDROBE CARTON AND METHOD OF ASSEMBLY OF HANGER BAR INTO CARTON

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Filed Dec. 28, 1966, Ser. No. 605,261
4 Claims. (Cl. 206—7)

ABSTRACT OF THE DISCLOSURE

This is a wardrobe carton which may be loaded from the top but which has perforated lines in at least one carton side wall to permit easy access to the contents of the carton. The wardrobe carton has a hanger bar supported at its top edges and a filler piece positioned in the top of the cartons with a central portion that partially embraces the hanger bar. The carton also has top side flaps in several sections so that the top side flaps can be folded to provide a flap section upon which certain folds of the filler piece are presented, and in this way the filler piece is supported completely away from clothing that is hung on the hanger bar. The central portion of the filler piece also tends to engage the clothing hanger suspended from the hanger bar to reduce sway.

The method of assembly of the hanger bar into the carton involves first loading the loaded clothing hangers on the hanger bar and then simultaneously positioning the loaded hanger bar upon the edges of a carton.

This invention relates to a wardrobe carton and method of assembly of hanger bar and constitutes a new and improved device of this general class as well as a novel packing method.

Most wardrobe cartons presently used involve a side loading feature whereby at least a portion of one side wall of the carton may be opened to allow the packer to insert clothing hangers loaded with clothing upon the hanger bar that is already supported by the carton in some manner such as suspension from the top edges.

It has been found that such side loading cartons have inherent weaknesses since although the carton is seemingly well taped or tied before transportation, the various destructive forces encountered in transportation will tend to be most effective along the weakest structural lines of the carton. These weakest lines will necessarily be along the parting lines which allow access to the carton in the side loading procedure. Also a side loading carton will be inherently weaker than a top loading carton. Heretofore, top loading has presented problems not only because of the bother in dropping down loaded clothing hangers onto the hanger bar, but also at the unpacking point where it is difficult to withdraw at least the first few loaded hangers from a well packed carton.

It is also a common practice to position a filler piece from the top portion of cartons heretofore used, and in order to support the filler piece it is the practice to have it rest or otherwise be in contact with the clothing on the hangers. With the rough forces encountered in transportation and handling, it has been found that there will be considerable rubbing or abrasion between the filler piece and the clothing which can have a disastrous effect upon the clothing. This is enhanced by the side swaying of the clothing when subjected to the aforesaid rough handling.

The foregoing problems as well as other problems have been solved by the present invention which provides a top loading wardrobe carton which can be inexpensively packed from the top by the assembly method of the present invention, but wherein the clothing may be removed from the side by virtue of certain construction features of the carton of the present invention.

Yet another object of the present invention is to provide a certain structure in the carton which will support the filler piece so that it can be held completely away from contact with the clothing supported on the hanger bar.

Still another object of the present invention is to reduce labor and taping time by providing a carton that can be simply loaded from the top.

Yet another object of the present invention is to provide a carton with side flaps that are so constructed that when the carton is fully assembled these side flaps will provide grab handles.

Still another object of the present invention is to provide a filler piece which is so supported that it will afford an area to hold paper documents, such as packing slips closely adjacent to the top of the carton.

Still another object of the present invention is to provide a filler piece that is so constructed that it will resist the tendency for hangers to fall off of the hanger bar in the event the boxes tumble, will reduce sway of the loaded materials and will otherwise afford a locking action upon the contents of the carton.

Still another object of the present invention is to provide a combination which includes a carton of improved construction which supports a hanger bar as well as providing the aforesaid carton with a filler member of improved construction or in the combination of all three elements.

Yet another object of the present invention is to provide an improved method of assembly of the hanger bar with loaded clothing into a carton.

The foregoing objects as well as other objects of the invention are achieved by providing a wardrobe carton with the usual front, rear and side walls, but wherein one of the walls here designated as the front wall possesses parallel perforated lines which extend upwardly onto the front flap of the carton. The carton further possesses top side flaps which are preferably divided into at least three longitudinal sections which enable the side flaps to be folded upwardly so that at least the outer section of the side flaps will be positioned upon a hanger bar that is also suspended from the top edges of the carton.

In this manner the previously inserted filler piece may be supported since certain front and rear folds thereof will be folded upon the aforesaid outer sections of the side flaps. Also, the various sections of the side flaps will provide grab handles.

The filler piece is held in a generally horizontal position immediately below the top of the carton and certain recessed areas of the filler piece will hold various documents such as packing slips. Thus, when the carton is opened the

packing slips will be immediately available before the unloading process begins. The filler piece also has a central portion, at least one side of which will be in contact with a portion of the hooks of the loaded hangers, and this tends to prevent sway during transportation and handling.

In the assembly method of the present invention, the top loading feature of the carton of the present invention is used to good advantage wherein the clothing is first loaded upon hangers which are suspended upon a hanger bar with the loaded hanger bar then being lowered into the carton and suspended from the top edges of the carton.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

FIG. 1 is an exploded perspective view of the carton of the present invention and also a loaded hanger bar to illustrate the assembly method of the present invention as well as showing the filler piece of the present invention;

FIG. 2 is a perspective view similar to FIG. 1 and illustrates the assembly of the hanger bar into the carton of the present invention;

FIG. 3 is a perspective view similar to FIGS. 1 and 2 but wherein the filler piece has been inserted into the top of the carton;

FIG. 4 is a perspective view showing a further assembly step of the carton of the present invention;

FIG. 5 is a perspective view showing another assembly step of the carton of the present invention;

FIG. 6 is a perspective view showing yet another assembly step of the carton of the present invention;

FIG. 7 is a perspective view of the final assembly step of the carton of the present invention;

FIG. 8 is an enlarged fragmentary sectional view taken along the line 8—8 of FIG. 7;

FIG. 9 is an enlarged sectional view taken along the lines 9—9 of FIG. 8;

FIGS. 10 and 11 are plan views of blanks from which the carton and filler piece of the present invention are assembled; and

FIG. 12 is a perspective view showing the unpacking of a carton of the present invention.

Reference is now made to the various figures of the drawing wherein like reference characters refer to like parts. There is shown at **10** in FIG. 1 the various components of the wardrobe carton of the present invention. In particular as shown in FIG. 1 the wardrobe carton of the present invention is essentially comprised of various structural features of the carton **12**, but in certain aspects the present invention also extends to the utilization of a hanger bar **14** and a filler member or piece **16** in combination with the carton **12** of the present invention.

As can be seen in the lower part of FIG. 1 the carton **12** basically comprises front wall **18**, rear wall **20** and side walls **22** with a seam or manufacturing joint **24** being provided (FIG. 1) where the rear wall **20** is stapled or otherwise secured to an extension **26** (FIG. 10) of one of the side walls **22**. The carton **12** further includes conventional bottom flaps, such as the flaps **28**.

It will be seen from FIG. 1 that the carton **12** further includes a left side flap **30**, a right side flap **32**, a front flap **34** and a rear flap **36** all of which extend from the top edges respectively of the side, front and rear walls.

As further shown in FIG. 2 a pair of parallel perforated lines **38** and **40** extend vertically for the upper portion of the front wall **18** and then continue across the front flap **34**. It is preferred for reasons of strength that the perforated lines be in a wall opposite to seam **24**. The perforated lines **38** and **40** are connected at their lower ends by a score line or crease **42** such that in opening of the carton **12** as shown in FIG. 12 the perforated lines **38** and **40** enable the user to remove the central portions of the flap **34** and front wall **18** in a central panel **94** with application of the proper amount of force in order to achieve the result of FIG. 12.

As further shown in FIG. 1 the side flaps **30** and **32** each include intermediate fold lines **44** and **44**, to produce sections **41**, **43** and **45** in flap **30** and sections **47**, **49** and **51** in flap **32**. The sections **41** and **47** provide support for the filler member **16** in the manner as shown in FIGS. 4 and 5 as will be discussed hereinafter.

The hanger bar **14** as shown in FIG. 1 basically comprises a main bar **46** which extends between end supports **48** and **50** that may be suspended respectively from the top edges **52** and **54** of the side walls **22**. For this purpose the end supports **48** and **50** are each comprised of a pair of parallel walls held together by a bridging section **56** which ultimately rests upon the top edges **52** and **54** in a manner as shown in FIG. 2. The clothing or suits **58** are individually held upon hanger **60** of a well known construction including hooks which are suspended upon the bar **46**. The hanger bar **46** may be of varying construction and many forms of the hanger bar are now well known to those skilled in the art with many of these being usable with the present invention. A special form of hanger bar utilizing a double channel construction also usable with the present invention is shown in concurrently filed application Ser. No. 605,400.

The details of the filler piece **16** are also shown in FIG. 1, with the filler piece **16** being essentially comprised of a central loop **62** from which extend base areas **64** and **66**. The central loop **62** is actually comprised of top section **68** and sides **70** and **72** extending downwardly from the top section **68** in a somewhat inclined manner to prevent swaying of the clothes as will be described hereinafter. As further shown in FIG. 1 the base areas **64** and **66** extend away from the sides **70** and **72** respectively. Side risers **74** and **76** extend upwardly from edges of the base areas **64** and **66** which are remote from the central loop **62**. The side risers **74** and **76** then merge into front fold **78** and rear fold **80**, the operation of which will be described hereinafter. However, it should be noted that the front fold **78** is somewhat wider than the rear fold **80** to facilitate proper location of the filler piece **16** in the carton **12** as will be described.

With the various details of the carton **12**, the hanger bar **14** and the filler piece **16** now having been described, the assembly of the aforesaid components will be discussed in detail with reference to FIGS. 2, 3, 4, 5, 6 and 7 of the drawing. As shown in FIG. 2 the hanger bar **14**, as already loaded with clothing, is dropped directly upon the carton **12** so that the end supports **48** and **50** of the hanger bar **14** rest upon upper edges **52** and **54** of the carton **12**. It is seen that the weight of the clothing **58** is transferred to the end supports **48** and **50** and this has the further effect of maintaining the end supports **48** and **50** in place as positioned upon the upper edges **52** and **54** of the carton **12**.

The next assembly step is shown in FIG. 3 wherein the filler member **16** is inserted into the open top of carton **12** in such a way that front fold **78** of the filler member **16** is positioned adjacent front flap **34** with the rear fold **80** being positioned adjacent the rear flap **36**. As was previously discussed the front fold **78** is somewhat wider than the rear fold **80**, and this will aid the operator or assembly man in properly inserting the filler member **16** in the top of the carton **12** since he will know that the higher or wider front fold **78** is to be positioned adjacent the front flap **34** which has the perforated lines **38** and **40** formed therein. As further shown in FIG. 3 the filler member **16** will be nicely seated at the upper open end of the carton **12** with central loop **62** being positioned about the hanger bar **46**, and this is shown in greater detail with reference to FIG. 8.

As previously discussed, one of the features of the present invention is the fact that the filler member will be maintained completely out of contact with the articles of clothing contained in the carton. However, in the condi-

tion of FIG. 3 the filler member **16** has no vertical support except for any frictional engagement that may be had between the side risers **74** or **76** and the interior faces of the front wall **18** and rear wall **20** respectively. Thus, in the next assembly step as shown in FIG. 4 each of the side flaps **30** and **32** is folded in such a manner that the outer sections **41** and **47** thereof are brought upwardly to a horizontal condition as shown by the arrows **82** of FIG. 4. This is permitted by virtue of the fold lines **44** and **44** in the side flaps **30** and **32**. In this way the innermost section **51** of side flap **32** is brought to a vertical position closely adjacent to the side wall **22** of the carton. The middle section **49** is bent upwardly, also to lie in a vertical plane but somewhat outwardly of the interior section **51** with the outer section **47** thereupon being folded into a horizontal plane as shown in FIG. 4. The flap **30** has a similar arrangement.

Thereafter as shown in FIG. 5 the front and rear folds **78** and **80** of the filler member **16** are folded downwardly into a horizontal plane in the direction of arrows **84** so that the front and rear folds **78** and **80** of the filler member are positioned upon and in contact with the outer sections **41** and **47** of the left and rear side flaps **30** and **32**.

It is thus seen with the foregoing folding sequence that the exterior sections **41** and **47** of the left and right side flaps **30** and **32** of the carton give vertical support to the front and rear folds **78** and **80** of the filler member. The aforesaid relationship is also readily apparent from a study of FIG. **8**.

It is further seen by an inspection of FIG. 5 and also FIG. 8 that by virtue of the foregoing support for the filler member **16** it does not in any way contact the clothing **58** supported on hanger **60** with the only contact occurring between the central loop **62** of the filler member **16** and the top of the hanger bar **46** as shown in FIG. 8. Otherwise the intermediate sections **64** and **66** of the filler member do not in any way contact the clothing. Instead the space existing above the intermediate sections **64** and **66** actually provides a receptacle area for identification papers and the like, such as packing slips **86**. In this way the packing slips **86** will be readily available to the user as soon as the carton is opened from the top.

The final packing steps are shown in FIGS. 6 and 7 wherein the front and rear flaps **34** and **36** are folded into a horizontal plane in the direction of arrows **88** of FIG. 6 with the seam **90** existing between the abutting flaps **34** and **36** being sealed off by the usual packing tape **92** as shown in FIG. 7.

Particular reference is made to FIG. 8 which shows that the base area **66** is slightly narrower than the base area **64**. This has the effect of causing side **72** of central loop **62** to be somewhat more inclined than the side **70**. The aforesaid inclination creates a pulling tendency in the side **72** toward the hanger **60** and this has the effect of urging the side **70** against a portion of the hook **61** as shown in FIG. 8. The net result is that the swaying tendency of the hanger **60** is restrained to a considerable degree, and furthermore should the carton be tumbled, the bearing relationship of the side **70** of loop **62** will prevent the hangers **60** from falling off bar **46**.

Attention is also called to the fact that the folded side flaps serve as grab handles as will be apparent in FIG. 6 or 7, and also the taping time with the present invention is considerably lessened since it involves the application of a single piece of tape to the top and sides of a carton which are usually very accessible.

As shown in FIG. 12 it is a simple matter to open the assembled carton of FIG. 7. First the tape **92** is severed or otherwise removed and then the front and rear flaps **34** and **36** are brought to their open position as represented by the rear flap **36** of FIG. 12. The filler member **16** is removed by unfolding front and rear folds **78** and **80** and then unfolding outer sections **41** and **47** of the left and right side flaps **30** and **32**.

With the filler member **16** removed, it is a simple matter for the person doing the unpacking to rip away a central panel **94** by grasping the central portion of front flap **34** and tearing it down along the perforated lines **38** and **40**. The central portion **94** will then hang down to the floor by virtue of the fold line **42**. Easy access to the contents of the carton **10** may then be had.

It is thus seen that there is provided a top loading carton which will be strong enough to resist the destructive forces encountered in transportation and yet can be opened without too much difficulty. During transportation the clothing hangs free and does not contact a filler member which also functions as a holding place for packing slips, etc. Furthermore, the carton is simply loaded as part of the top loading method of the present invention by dropping the loaded hanger bar upon the side of the carton.

The actual blank used to make the carton **10** is illustrated in FIG. 10 which is believed to be self-explanatory since the same reference characters are utilized in FIG. 10 as in the other figures of the drawings. Similar comments apply to the blank of FIG. 11 from which the filler member **16** is prepared.

With the present invention it has been found that upon delivery the contents usually do not need any pressing or other finishing and can be hung by the clothing stores directly in the display room or be delivered to a customer without further preparation.

Without further elaboration, the foregoing will so fully illustrate my invention, that others may, by applying current or future knowledge, adapt the same for use under various conditions of service.

What is claimed as the invention is:

1. A top loading, front opening wardrobe carton comprising front, rear and side walls defining a top opening, and a hanger bar supported by at least certain of said walls and extending across said opening, said carton also including a front flap extending from the top edge of said front wall with said front flap being folded to a generally horizontal closed position over said top opening and sealed in such position after said hanger bar has been loaded with clothing, and at least a pair of spaced perforated lines formed in said front wall and extending toward said front flap and onto said front flap whereby said carton is loaded from the top and sealed, with said carton then being unloaded by tearing said front flap and front wall along said perforated lines to permit front access to said clothing, said carton further including flaps extending from the top edges of at least certain of said other walls, said flaps together with said front flap being folded to a generally horizontal position and sealed in such position to close off said top opening after said hanger bar has been loaded with clothing, said perforated lines being substantially parallel and extending continuously from said front wall and across said front flap to the free edge thereof.

2. The invention of claim **1** including a filler member positioned adjacent said top opening with said carton including at least one side flap extending from the upper edge of one of said side walls, said side flap being of sufficient length that it includes an outside portion that is disposed in a horizontal plane adjacent said top opening, said filler member including folded areas which rest upon said flap outside horizontal portions whereby said flap portions support said filler member completely out of contact with the clothing in said carton.

3. The invention of claim **2** wherein said filler member includes a central section including sides, said central section partially embracing said hanger bar and said filler member also includes somewhat recessed base areas extending from said central section, said base areas being adapted to hold packing slips and other shipping and descriptive documents with said side flaps being so folded as to provide grab handles.

4. The invention of claim **3** wherein one of said base areas of said filler member is somewhat narrower than the other of said base areas whereby a side of said central section is forced into contact with a portion of said cloth-

ing hanger to resist sway of said hanger from falling from said hanger bar.

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