April 30, 1968 L. A. CROWL 3,380,596

GARMENT SUPPORT MEANS

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Fig. 1.

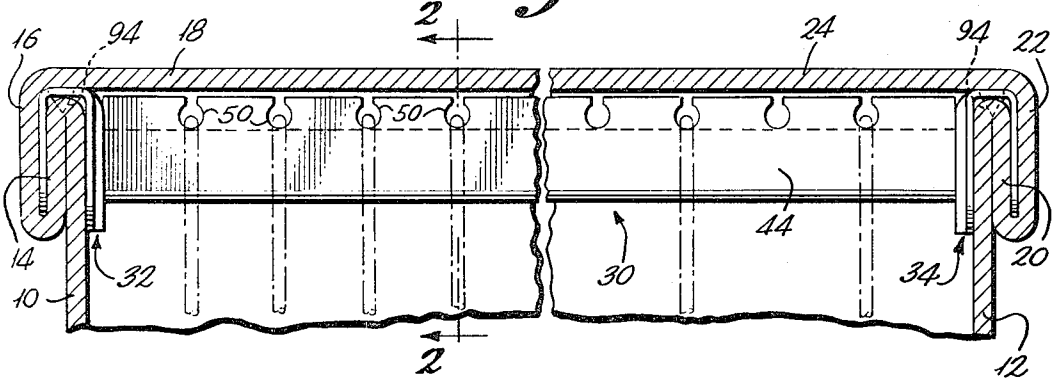
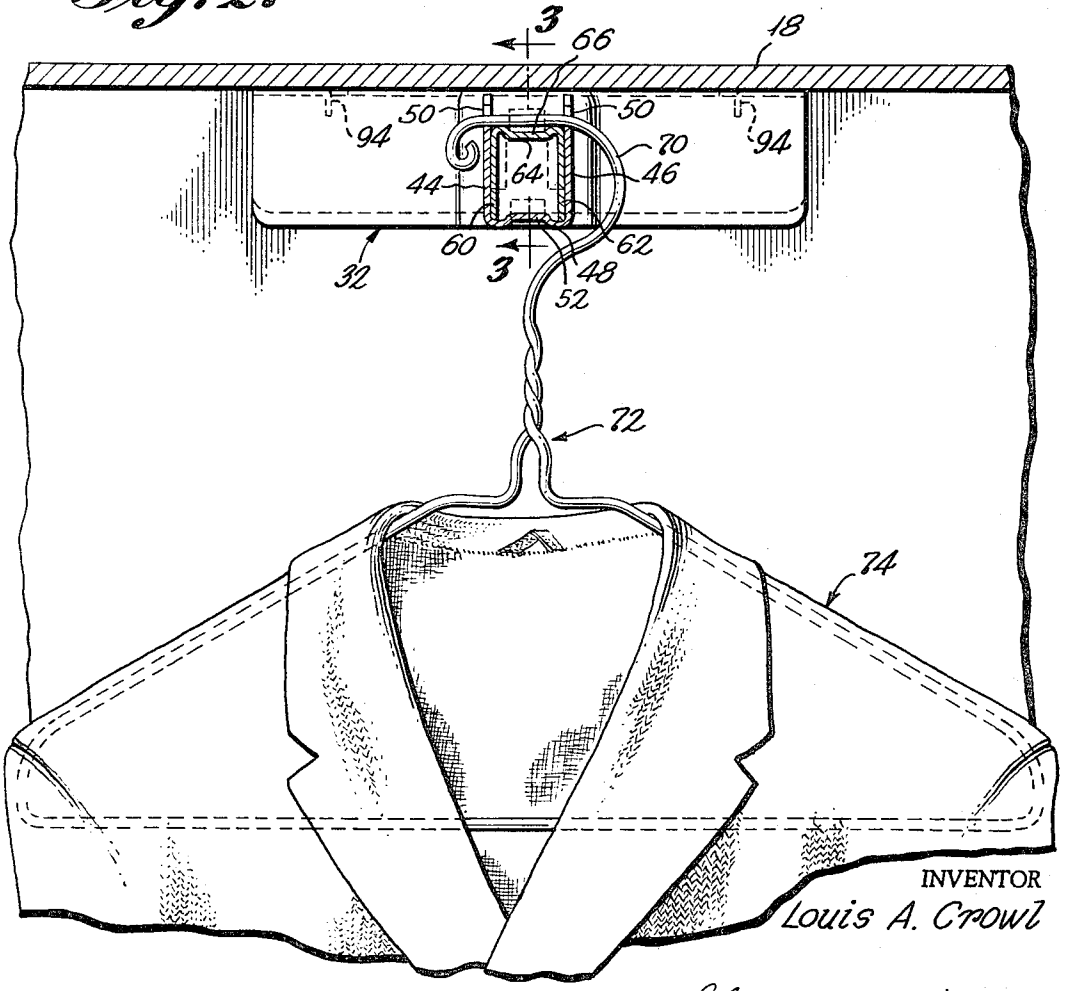


Fig. 2.



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Fig. 3.

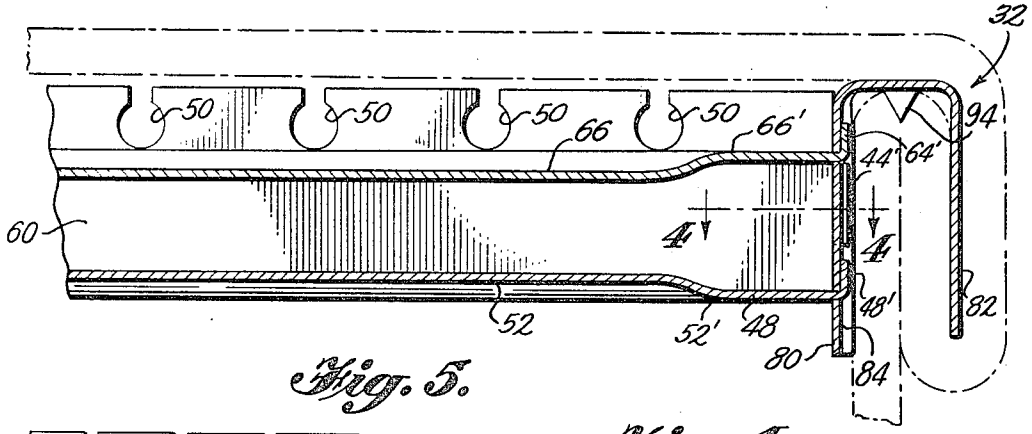


Fig. 5.

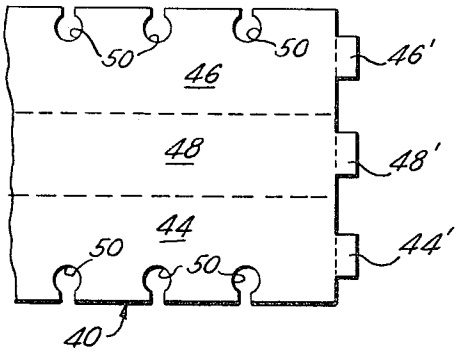


Fig. 4.

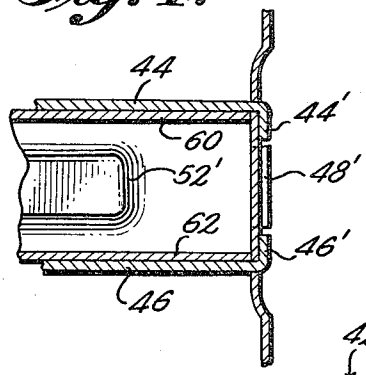


Fig. 6.

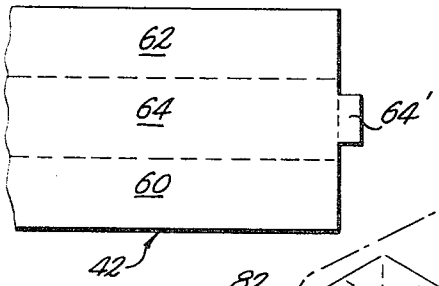
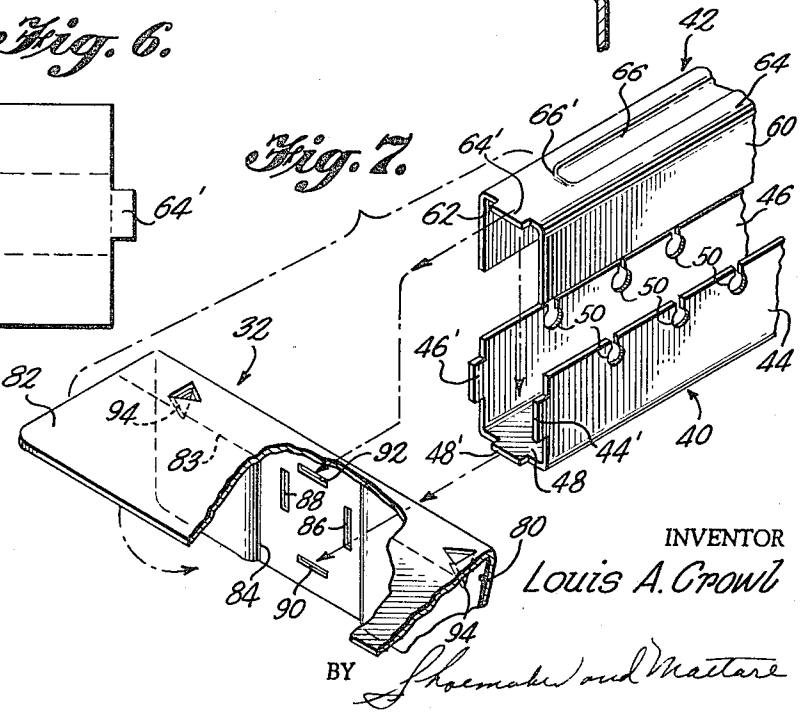


Fig. 7.



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United States Patent Office 3,380,596 Patented Apr. 30, 1968

3,380,596

GARMENT SUPPORT MEANS

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Filed Jan. 21, 1966, Ser. No. 522,317
9 Claims. (Cl. 211—123)

ABSTRACT OF THE DISCLOSURE

The present invention is a garment support means having a pair of support portions at opposite ends thereof which fit over and are supported upon the side walls of a garment container or carton. A hanger engaging portion extends between the support portions and is provided with a plurality of spaced slots in the upper portion thereof for receiving the hook portions of wire hangers to support garments therefrom.

The present invention relates to new and novel garment support means, and more particularly to garment support means adapted to be supported at the open upper end portion of a garment container or carton.

The garment support means of the present invention is especially adapted for use in applications where large numbers of garments such as suits or the like are shipped for example from a factory to a distributor or retailer, and wherein the garments are suspended within the shipping container on conventional wire hangers which are in turn mounted upon the garment support means of the present invention.

The garment support means includes support portions at the opposite ends thereof which are adapted to fit over upper edges of the shipping container, and the garments are supported in a desired spaced relationship within the container so as to maintain the garments in good condition throughout the shipping operation.

Garment support means of this nature are generally throw-away items which are only used one time and then discarded. Accordingly, they must be of inexpensive construction. At the same time, it is essential that the garment support means have adequate strength to prevent buckling and collapse thereof while being shipped. This problem is compounded by the fact that this type of shipping container is often subjected to rough handling and abuse, thereby requiring an extremely rugged construction in the garment support means.

Prior art garment support means have often lacked adequate strength to prevent buckling of the support means not only at the midportion thereof, but also at the side portions thereof where the support means is interconnected with the associated shipping container. In the present invention, a unique construction is provided whereby maximum strength and rigidity of the garment support means is obtained, while at the same time the cost of manufacture is reduced to a minimum. With the rugged construction of the present invention, the garment support means is adapted to absorb rough handling and abuse without undue damage thereto.

An important feature of the present invention is the fact that it may be manufactured completely from a desirable substance such as galvanized iron which is clean, is cheaper than iron which has heretofore been employed, and further which does not require painting with the attendant problem of paint chipping off of the article. The use of galvanized iron or the like is possible due to the novel manner in which the various components of the apparatus are interconnected with one another. The hanger engaging portion comprises a pair of channel members, one received within the other, and the two channel members facing in opposite directions whereby they intercooperate with one another to provide a very strong and rigid arrangement. These channel members are in turn interconnected with the associated support portions at opposite ends thereof by a mechanical interlocking arrangement wherein tabs formed on the channel members extend through slots in the support portions. This manner of interconnection of the components completely eliminates the necessity of employing soldering or welding of components. Where the prior art structures have been welded to one another, it has been considered necessary to employ more expensive weldable material, whereas galvanized iron cannot be readily welded. Furthermore, the tab and slot interconnection can be readily manufactured and assembled with a considerable saving in time as compared with procedures such as welding, soldering or bolting components to one another.

The double channel construction of the hanger engaging portion provides a very simple yet quite strong arrangement. The two channel members are disposed in reverse relationship to one another, one of the channel members being received within the other of the channel members and having the opposite legs thereof disposed in engagement with the opposite legs of the other channel member so as to prevent collapse of the outer channel leg members inwardly toward one another under load. Additionally, the inner channel member functions as a load bearing member whereby the two channel members intercooperate with one another to afford maximum strength at a minimum cost. These two channel members are each provided with longitudinally extending indentations therein so as to further rigidify the individual channel members.

Spaced slots are provided in the upper edges of the outer channel member for receiving the hangers upon which the garments are supported. These slots are of a particular configuration, namely, generally key-hole shaped. This specific configuration is of particular advantage in this application. The narrow upper portion of the key-hole slots is of course adapted to receive the upper hook portion of the wire hangers. When the garments are in the process of being loaded into the containers, they are first mounted upon the wire hooks which are in turn placed upon one of the garment support means according to the present invention. This garment support means is in turn carried by suitable conveyor means to a position in overlying relationship to the open upper end of a shipping container. Accordingly, the conveyor means carries the garment support means and the supported garments upwardly at an angle and with a relatively jerky motion. The key-hole shape of the slots prevents the wire hangers from jumping out of the slots as the garment support means moves thusly along a conveyor mechanism, and accordingly, the garments are retained in proper spaced relationship supported within the garment support means during movement along the conveyor mechanism and prior to being placed into position within a shipping container. The key-hole slots will also tend to retain the hangers in proper position during the shipping operation wherein the containers may from time to time be tipped over or knocked down.

A further feature of the present invention is the fact that the tabs formed on the channel members extend through slots in the support portions at opposite ends thereof and are disposed within recesses in said support portions. In this manner, the tabs do not extend into the downwardly facing channel of the support means which is adapted to receive the upper edge portion of a container, and there is no possibility that the support portions will hang up on the upper edges of the container.

Another feature of the invention is the provision of projection means on each of the support portions of limiting relative movement between the garment support

means and an associated container during shipment. The projection means may comprise integral pointed projections which are adapted to extend into the adjacent carton portions for limiting such relative movement and to maintain the garment support means in the proper operative position.

Summary of the invention

The hanger engaging portion of the present invention comprises a pair of channel members, one received within the other, the two channel members facing in opposite directions whereby they intercooperate with one another to provide a very strong and rigid arrangement. These channel members are in turn interconnected with the associated support portions at opposite ends thereof by a mechanical interlocking arrangement wherein tabs formed on the channel members extend through slots in the support portions. These tabs are disposed within recesses provided in the support portions. Projection means is provided on each of the support portions for limiting relative movement between the support means and the associated container. Spaced slots are provided in the upper edges of the outer channel member of the hanger engaging portion for receiving the hangers upon which the garments are supported. These slots are of a particular configuration, namely, generally key-hole shaped.

An object of the present invention is to provide new and novel garment support means which is adapted to be supported at the upper end portion of a garment container or carton and which is of such a construction as to provide adequate strength to prevent buckling at any portion thereof.

Another object of the invention is to provide garment support means which is adapted to absorb rough handling and abuse without undue damage.

A further object of the invention is the provision of garment support means which eliminates the necessity of welding, soldering or bolting any of the components to one another.

Still another object of the invention is to provide garment support means including specially shaped slot means for preventing hangers from being disengaged therefrom when the garment support means is moving on a conveyor at an angle to the horizontal and with a relatively jerky motion.

A still further object of the invention is the provision of garment support means wherein the support portions thereof are of such a construction as to prevent the support portion from hanging up on the side of a shipping container.

Still another object of the invention is to provide a garment support means which is simple and inexpensive, and yet which at the same time is quite clean, does not require painting and which is strong and reliable in use.

Yet another object of the invention is to provide projection means for limiting relative movement between the garment support means and an associated container.

Other objects and many attendant advantages of the invention will become more apparent when considered in connection with the specification and accompanying drawings, wherein:

FIG. 1 is a vertical section partly broken away through a shipping container illustrating the garment support means of the present invention in operative position therewithin;

FIG. 2 is a sectional view taken substantially along line 2—2 of FIG. 1 looking in the direction of the arrows;

FIG. 3 is a sectional view on an enlarged scale taken along line 3—3 of FIG. 2 looking in the direction of the arrows;

FIG. 4 is a sectional view taken substantially along line 4—4 of FIG. 3 looking in the direction of the arrows;

FIG. 5 is a plan view of one end portion of the blank from which the outer channel member is formed;

FIG. 6 is a plan view of the blank from which the inner channel member is formed; and

FIG. 7 is a top perspective exploded view partly broken away illustrating the manner of interconnection of the channel members and their support portions as well as indicating the mode of manufacture of the completed article.

Referring now to the drawings wherein like reference characters designate corresponding parts throughout the several views, FIGS. 1 and 2 illustrate the garment support means in operative position within a shipping container. The shipping container may be formed of cardboard or similar material as is conventional in the art, the container including opposite side wall portions **10** and **12**. Side wall portion **10** is bent downwardly at the upper portion thereof to form a layer **14** which in turn in then bent upwardly to form a layer **16** which further joins with a top flap member **18**. In a similar manner, the upper portion of the side wall **12** is bent downwardly to form a layer **20** which in turn is bent upwardly to form a layer **22** which further joins with a top flap **24**, it being understood that top flaps **18** and **24** will have the outer edges thereof closely adjacent one another to form a seam which can then be sealed in the usual manner.

The garment support means includes a hanger engaging portion indicated generally by reference numeral **30**, a pair of support portions **32** and **34** being connected to opposite ends of the hanger engaging portion, and each of these separate support portions defines a downwardly facing channel adapted to receive the upper portions of the members **10**, **14** and **12**, **20** respectively, whereby the garment support means is supported in the operative position shown at the upper part of the container.

As seen most clearly in FIG. 7, the hanger engaging portion comprises a pair of separate channel members **40** and **42**. The channel member **40** opens in an upward direction and includes spaced leg portions **44** and **46** each of which are integral with and extend perpendicularly from a connecting portion **48**. Tabs **44'**, **46'** and **48'** are formed integral with the channel member **40** and extend longitudinally from the portions **44**, **46** and **48** respectively, these tabs serving to lock the channel member to the associated support portion as hereinafter described.

A plurality of spaced slots **50** are provided in the upper edges of the opposite legs **44** and **46** of channel member **40**. These slots **50** are of generally key-hole shaped configuration to define a relatively narrow opening at the upper edges of the legs and an enlarged arcuate lower portion. These slots are adapted to receive the hook portions of more or less conventional wire hangers as more fully set forth hereinbelow.

Channel member **40** is initially formed from a flat sheet of material such as shown in FIG. 5, the sheet of material being cut out to the shape shown in FIG. 5 and then bent along the dotted lines indicated in FIG. 5 to form the completed channel member. The leg portions **44** and **46** are first bent upwardly at substantially right angles to the connecting portion **48**, and the tabs **44'**, **46'** and **48'** are later bent into final locking position as will appear hereinafter.

A longitudinally extending indentation **52** is formed in the undersurface of the connecting portion **48**, this indentation terminating at points **52'** short of the opposite ends of the channel member. Indentation **52** serves to rigidify the channel member.

The second channel member **42** includes a pair of opposite legs **60** and **62** which are formed integral with and extend substantially perpendicularly from the connecting portion **64**. This connecting portion includes integral longitudinally extending tabs **64'** at the opposite ends thereof. A longitudinally extending indentation **66** is provided in the connecting portion **64** and terminates short of the opposite ends of the connecting portion at points indicated by reference numeral **66'**. This indentation serves to rigidify this channel member.

The blank from which channel member 42 is formed is illustrated in FIG. 6, it being understood that the legs 60 and 62 are bent up from the connecting portion 64 along the dotted lines indicated in this view. The tab 64' is subsequently bent along the dotted line indicated between the tab and the connecting portion, this tab being bent into the final operative position after being assembled with respect to the associated support portion. As is the case with channel portion 40, the longitudinally extending indentation in the channel portion 42 is formed therein prior to assembly of the channel members.

In the operative position of the channel members as seen most clearly in FIG. 2, the channel member 42 is received within the channel member 40, whereby the channel members 42 and 40 may be referred to as the inner and outer channel members respectively. It will be noted that the outer surfaces of the legs of the inner channel member are in abutting relationship to the inner surfaces of the opposite legs of the outer channel member, and that the lower edges of the legs on the inner channel member rest upon the connecting portion of the outer channel member.

It should also be noted as seen in FIG. 2 that the connecting portion 64 of the inner channel member is disposed such that the upwardly facing surface thereof is substantially flush with the lower portions of the slots 50. With this arrangement, the bottoms of the slots and the upper surface of the connecting portion of the inner channel member both may serve to support the hook portion 70 of a conventional wire hanger member indicated generally by reference numeral 72. As seen in FIG. 2, the hanger 72 is disposed in operative supported position relative to the garment support means, and a suitable garment such as a fabric jacket or the like indicated by reference numeral 74 is supported by the hanger.

Referring particularly to FIG. 7, the construction of support portion 32 is illustrated, it being understood that support portion 34 is of identical construction and is simply a mirror image thereof as seen in the drawings. Support portion 32 may be initially bent as seen in FIG. 7 to be of generally L-shaped cross sectional configuration including leg portions 80 and 82. The leg portion 82 is subsequently bent downwardly along the dotted line 83 so as to be disposed in spaced parallel relationship with the leg portion 80 as seen in FIG. 3 whereby a downwardly opening channel is formed.

As seen in FIG. 7, the central part of leg 80 is provided with a recess 84, this recess extending away from the leg portion 82 after it has been deformed into its final position. A plurality of slots 86, 88, 90 and 92 are provided through leg portion 80.

It will further be noted as seen in FIG. 7 that the leg portion 82 has a pair of struck-out portions or projection means 94 formed integral therewith and extending downwardly at substantially right angles thereto, these projection means being of generally triangular shape to form sharp downwardly extending points which are adapted to interengage adjacent portions of the container when the apparatus is in operative position. This interengagement of these projection means with the material of the container limits relative movement of the apparatus of the present invention with respect to the container so that side to side shifting of the garment support means in the sealed carton during shipment will be prevented.

When the apparatus is assembled, the two channel members 40 and 42 are initially nested together, and the slots thereof inserted through the slots in the associated support portions. In other words, tabs 44' 46' and 48' are inserted through slots 86, 88 and 90 respectively, the tabs then being bent so as to positively lock the channel member 40 to the associated support portion. The tab 48' may be bent in an upward direction after being inserted through slot 80, and the two tabs 44' and 46' may be bent toward one another after having been inserted through slots 86 and 88. In a similar manner, the tab 64' is inserted through slot 92 and then may be bent upwardly to lock channel member 42 in the final operative position.

It will be understood that the channel members are mechanically locked to each of the support portions 32 and 34 in a similar manner to provide the assembled rigid structure. The garment support means is then ready for use, and a plurality of garments may be supported thereon by means of hangers as indicated in FIG. 2, one hanger being disposed within each pair of slots disposed opposite one another in the channel member 40. The garment support means along with garments supported thereby may then be lowered into a container into the operative position shown in FIG. 1, whereupon the container is sealed and is ready for shipment. In this position, the downwardly extending projection means 94 extend into the material of the container to hold the garment support means in operative position. It will also be noted that simply by glancing either at the top or side of the slots in the hanger engaging portion before sealing the container, a person can readily detect whether the garment support means is fully loaded, and if one or more hangers and the associated garments are missing, this can be readily detected.

It is apparent from the foregoing that there is provided according to the present invention a new and novel garment support means which is particularly adapted to be supported at the open upper end portion of a garment container or carton and wherein the over-all construction provides adequate strength to prevent buckling either in the middle or at the side portions of the apparatus. This arrangement is adapted to absorb rough handling and abuse without undue damage, and the mechanical interconnection between the various parts eliminates the necessity of welding or soldering or bolting any of the parts together. The key-hole shaped slots prevent the hanger from being disengaged from the apparatus when it is moving on a conveyor at an angle and with a jerky motion. The recess provided in each of the support portions ensures that the tabs thereof do not extend inwardly beyond the adjacent inner face of the associated leg of the support portion whereby the tabs do not in any way interfere with proper movement of the support portions into operative relationship with the sides of a container. The over-all arrangement is quite simple, inexpensive and clean in construction, it does not require any paint, and yet at the same time is quite strong and reliable in use.

As this invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, the present embodiment is therefore illustrative and not restrictive, and since the scope of the invention is defined by the appended claims, all changes that fall within the metes and bounds of the claims or that form their functional as well as conjointly cooperative equivalents are therefore intended to be embraced by those claims.

I claim:

1. Garment support means comprising a hanger engaging portion, a pair of support portions mounted at opposite ends of said hanger engaging portion for engaging portions of a container, said hanger engaging portion including first and second separate channel members disposed adjacent one another and in engagement with one another to provide a strong and rigid structure, said first channel member opening in an upward direction and defining a pair of spaced legs joined with one another by a connecting portion, the upper edges of said spaced legs having a plurality of spaced slots formed therein for receiving hangers, said first channel member having tabs formed integral with the opposite end portions thereof and extending longitudinally thereof, said second channel member opening in a downward direction and being positioned within said first channel member, said second channel member having tabs formed integral with the opposite end portions thereof and extending longitudinally there-

from, each of said support portions having a plurality of slots formed therein, the tabs on said first and second channel members extending through the slots in the associated support portions and being bent to one side so as to mechanically lock the first and second channel members and said support portions to one another to provide a strong and rigid structure.

2. Apparatus as defined in claim 1 wherein each of said support portions includes projection means extending therefrom and interengageable with a portion of an associated container for limiting relative movement between the support portions and the associated container.

3. Apparatus as defined in claim 1 wherein at least one of said channel members is provided with a longitudinally extending indentation therein to rigidify the channel member.

4. Apparatus as defined in claim 1 wherein each of said support portions includes a recessed area therewithin for receiving said tabs.

5. Garment support means comprising a hanger engaging portion, a pair of support portions mounted at opposite ends of said hanger engaging portion for engaging portions of a container, said hanger engaging portion including first and second separate channel members disposed adjacent one another and in engagement with one another to provide a strong and rigid structure, said first channel member opening in an upward direction and defining a pair of spaced legs and a connecting portion, the upper edges of said spaced legs having a plurality of spaced slots formed therein for receiving hangers, said first channel member having a plurality of tabs formed integral with the opposite end portions thereof and extending longitudinally therefrom, said second channel member opening in a downward direction and defining a pair of spaced legs and a connecting portion, said second channel member being received within said first channel member with the outer surfaces of the spaced legs of said second channel member being disposed adjacent the inner surfaces of the spaced legs of said first channel member and with the lower edges of the spaced legs of said second channel member being disposed adjacent the connecting portion of said first channel member, the connecting portion of said second channel member being disposed substantially flush with the lower portion of said slots formed in said first channel member, said second channel member having tabs formed integral with the opposite end portions thereof and extending longitudinally therefrom, said support portions having a recess formed therein and a plurality of slots formed in said support portions and in communication with said recess, the tabs on said first and second channel members extending through said slots and being bent to the side to mechanically lock said first and second channel members to said support portions to provide a strong and rigid structure, the tabs being disposed within said recesses in the support portions.

6. Apparatus as defined in claim 5 wherein said slots are of generally key-hole shaped configuration and wherein the connecting portions of said first and second channel members are provided with a longitudinally extending indentation therein to rigidify the associated channel members.

7. Garment support means comprising a hanger engaging portion, a pair of support portions mounted at opposite ends of said hanger engaging portion for engaging portions of a container, said hanger engaging portion including first and second separate channel members disposed adjacent one another and in engagement with one another to provide a strong and rigid structure, one of said channel members opening in an upward direction and including spaced integral substantially parallel leg portions joined with one another by a connecting portion, each of said leg portions having an upper edge, a plurality of spaced slots being provided in the upper edge of each of said spaced leg portions with each of the slots in one of said leg portions being disposed substantially opposite one of the slots in the other of said leg portions for receiving spaced portions of the hook portions of wire hangers.

8. Apparatus as defined in claim 7 wherein the other of said channel members opens in a downward direction and engages the connecting portion of said one channel member.

9. Apparatus as defined in claim 7 wherein the other of said channel members opens in a downward direction, said second channel member being positioned within said first channel member and including spaced integral substantially parallel leg portions joined with one another by a connecting portion, each of said last-mentioned leg portions having a lower edge supported by the connecting portion of said one channel member.

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