

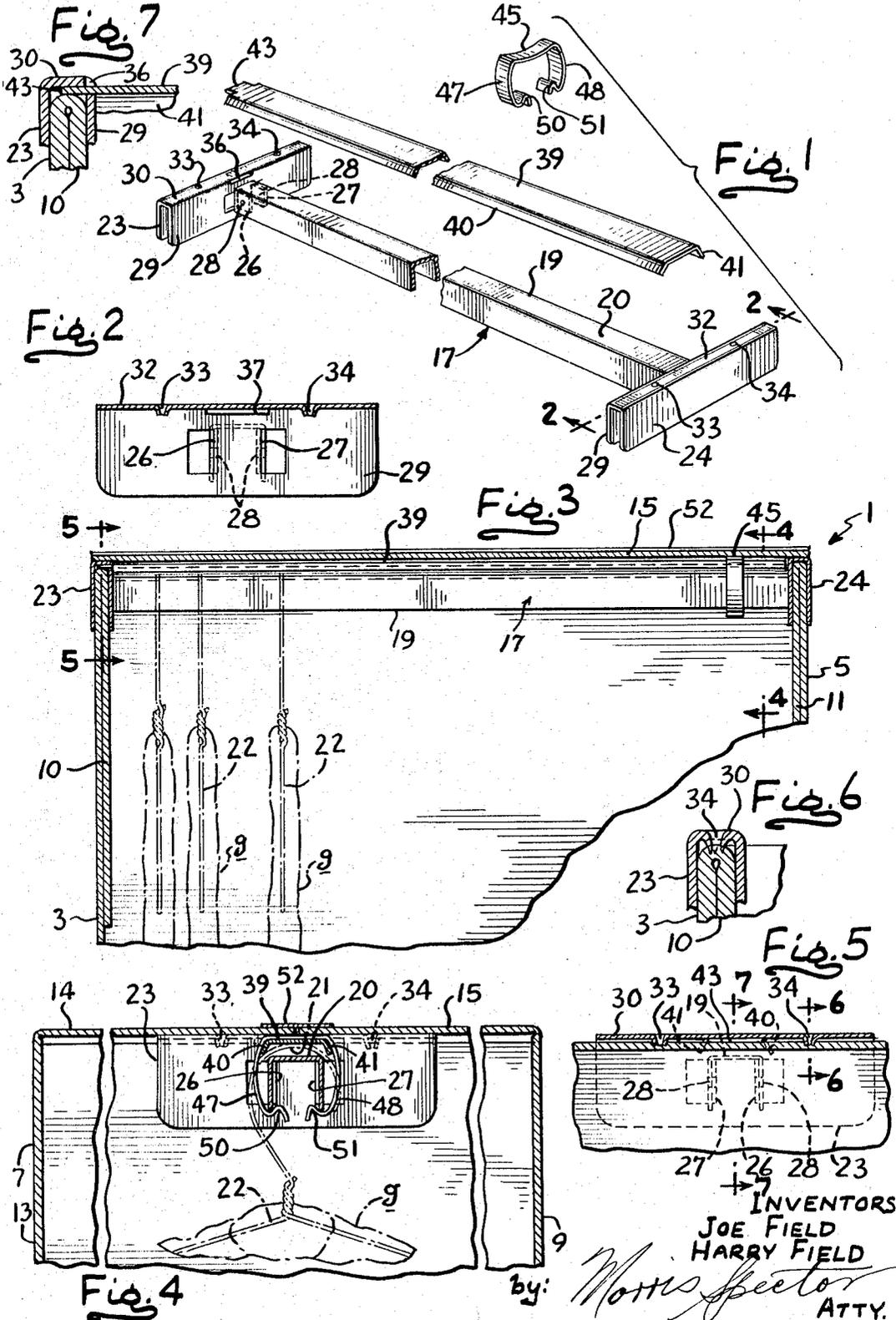
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HANGER SUPPORT BAR FOR GARMENT PACKING CASE

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**HANGER SUPPORT BAR FOR GARMENT  
PACKING CASE**  
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The present invention relates generally to containers for shipping and storage of hanger supported garments, and more particularly to an improved hanger support bar for use with such container.

It is an object of the present invention to provide an improved hanger support bar for use in a garment packing case for the purpose of supporting the hook ends of garment hangers within the case, and wherein a novel construction is provided for retaining the hook ends of the hangers in place. The present invention reduces the likelihood of the garments becoming wrinkled or damaged during shipment of the case. In accordance with this object of the invention, a retainer strip overlies the hangers and hold the hook ends thereof against the hanger bar. The retainer has a tongue at one end that interfits with a slot on an end bracket of the hanger bar, and one or more spring bands secure the retainer to the support bar. The spring band or spring bands, as the case may be, cooperate with the tongue and bracket interfit to hold the clamping strip assembled with the bar to retain the hook ends of the garment hangers firmly in position.

It is a further object of the present invention to provide a hanger support bar which is firmly secured to the top portions of opposed sides of the packing case in a manner to prevent either end of the bar from sliding along those top portions during rough handling that sometimes occurs during shipment of the packing case. This prevents garments from being abraded by the carton and possibly being damaged. To accomplish this object of the invention, the end brackets of the support bar are formed with sharp prongs or fingers that bite into the aforesaid top portions of the case walls when the bar is assembled with the case. When the garment-filled hangers are placed on the bar, the weight of the garments exerts additional pressure on the brackets, embedding the prongs deeper into the case, thus enhancing the grip of the prongs thereon and insuring that they do not become withdrawn from the case during shipment.

It is another object of the present invention to provide a hanger support bar of the type stated which is less costly than hanger support bars of a type heretofore used.

The attainment of the above and further objects of the present invention will be apparent from the following description taken in conjunction with the accompanying drawing forming a part thereof.

In the drawing:

FIG. 1 is an exploded perspective view of a hanger bar constructed in accordance with and embodying the present invention;

FIG. 2 is a sectional view taken along line 2—2 of FIG. 1;

FIG. 3 is a vertical fragmentary sectional view of the upper end of a garment packing case with the hanger bar mounted therein;

FIGS. 4 and 5 are fragmentary sectional views taken along lines 4—4 and 5—5, respectively, of FIG. 3; and

FIGS. 6 and 7 are fragmentary sectional views on an enlarged scale taken along lines 6—6 and 7—7 of FIG. 5.

Referring now in more detail and by reference characters to the drawing, which illustrates a preferred embodiment of the present invention, 1 designates a gar-

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ment packing case which may, by example but not of limitation, be of the type shown in our United States Patents 3,035,688 and 3,112,027. The garment packing case 1 may be formed of a blank of heavy corrugated fiber board, cut and scored according to a predetermined design, to facilitate folding thereof into a rectangular packing case having opposed side walls 3, 5, a front wall 7 and a back wall 9. The side walls 3, 5 may have top flaps 10, 11 inturned to form double thickness side wall top portions. The upper portion of the front wall 7 preferably constitutes a door 13 swingable about a vertical axis at the connection therewith and one of the side walls. This permits relatively unrestricted access to the container. The lower portion of the front wall may be a sill (not shown) secured at its opposite ends to the edges of the side walls. The front and back wall top flaps 14, 15 may be folded against the side wall top edges to form a top closure for the case 1, and a similar set of bottom flaps (not shown) on the front end back walls may be used to form a bottom closure for the case 1.

A garment hanger bar 17 is removably mounted on and extends between the top portions of the opposed side walls 3, 5. This bar 17 is of heavy gauge sheet metal so as to be of rigid construction. It includes a U-shaped channel member 19 having rectangular bight 20 for engagement by the hook ends 21 of garment hangers 22. Inverted U-shaped brackets 23, 24 are rigidly secured to the opposite ends of the channel member 19. This may be done in any suitable manner, as for instance by striking out flanges 26, 27 on one leg 29, 29 of each bracket 23, 24 at appropriate places, and welding the flanges at spots 28 flush against the inside surfaces of the depending legs of the channel member 19.

The bights 30, 32 of the brackets 23, 24 have groups of generally triangular, sharp pointed prongs 33, 34 struck therefrom and lying between the legs of the associated brackets. The two groups of prongs 33, 34 on each bracket are preferably widely spaced, being located on opposite sides of the channel member 19. As best shown in FIG. 6, these prongs 33, 34 cut into the double thickness side wall top edges of the carton and prevent the brackets 23, 24 (and hence the entire bar 17) from shifting along the side wall top edges.

The overall length of the hanger support bar 17 is fabricated in accordance with the spacing of the side walls 3, 5 so that the brackets 23, 24 will fit in embracing relationship to the side wall top portions. The brackets 23, 24 are, furthermore, of such size as to have relatively large seating contact areas with the side wall top portions which serves to strengthen and rigidify the packing case 1.

Above the channel member 19 each bracket 23, 24 has a slot 36, 37 which opens toward the opposite bracket. Each slot 36, 37 is preferably located approximately at the junction of the bight 32 or 33 and associated inner bracket leg 29.

A retainer 39 of heavy gauge sheet metal is adapted to overlie the hook ends 21 to hold them on the channel member bight 20. The retainer 39 has angularly downwardly extending flanges 40, 41 which run substantially from one bracket 23 to the other 24 and which bear against the hook ends 21. At one end the retainer 39 has an extension or tongue 43 that projects beyond the ends of the flanges 40, 41. The tongue 43 projects through the slot 36 to lie between the bight 30 of the bracket 29 and the adjacent top edge of the side wall 3. This secures one end of the retainer 39 against upward retraction. Near the other end of the retainer 39 a spring band 45 embraces the retainer 39 and channel member 19, as shown in FIG. 4, to hold the adjacent

end portion of the retainer 39 assembled with the channel member 19.

While the tongue 43 is shown as projecting through the slot 36, it will be apparent that the retainer 39 may be turned 180 degrees so that the tongue 43 projects through the slot 37 on the bracket 24. Thus, while the slot of only one bracket is utilized to secure the retainer 39 in place, the brackets may be fabricated alike and the person securing the retainer in place need not be concerned with whether or not it is properly oriented for insertion of the tongue 43 through the correct bracket.

For hanger bars of relatively short length, namely those used with narrow garment packing cases, only one spring band 45 may be required. However, for larger garment packing cases using somewhat longer hanger bars, more than one spring band 45 are generally required, in which case the spring bands are appropriately spaced apart along the length of the channel member 19.

With the garment packing case set up, the hanger bar is mounted in place, centered between the front and back walls 7, 9. When the brackets 23, 24 are placed over the side wall top portions, they are pressed or stuck firmly into place causing the prongs 33, 34 to become embedded in the side wall top edges. The hangers 22, with garments *g* thereon, are placed with the hooks 21 on the channel member 19. The tongue 43 is inserted into one of the slots, say the slot 36, and then swung downwardly to bear upon the garment hanger hooks 21. Thereafter, the spring band 45 is secured in place. The retainer 39 will lie roughly parallel with the channel member 19. The spring band 45 may be of the type shown in our Patent No. 3,112,027. Thus it may have arcuate arms 47, 48 which terminate in hook-like ends 50, 51 that are adapted to snap under the bottom edges of the legs of the channel member 19. By pressing the arcuate arms 47, 48 together, the ends 50, 51 are caused to spread apart to enable them to clear or slide along the legs of the channel member 19. Upon release of the arms 47, 48 the ends of 50, 51 firmly grip the bottom edges of the channel member 19. The case 1 may be closed in a conventional manner as by folding the top flaps 14, 15 downwardly onto the side wall top edges and then securing them in place by a strip of tape 52.

Prior to use of the hanger bar 17, the interfit of the tongue 43 in one of the slots 36 or 37 of the brackets, together with the spring band 45 serve to retain the clamping strip 39 and the rest of the hanger bar in assembled relationship. However, by pressing on the sides 47, 48 of the spring band 45, the ends 50, 51 may be spread apart an amount sufficient to permit the spring band to be removed from the channel member 19.

In compliance with the requirements of the patent statutes we have herein shown and described a preferred embodiment of the invention. It is, however, to be understood that the invention is not limited to the precise construction herein shown, the same being merely illustrative of the principles of the invention. What is considered new and sought to be secured by Letters Patent is:

1. A hanger support bar for a garment packing case, said support bar comprising inverted U-shaped end brackets for supporting engagement with opposed walls of the packing case, each bracket having spaced legs joined by a bight, one of said brackets having a slot approximately in the region of the junction of the bight and one leg and opening toward the other bracket, a member spanning the space between the brackets and being rigidly secured to one leg of each and having a top for receiving and supporting the hook ends of garment hangers and with said top being below said slot, a retainer overlying the top of the member for disposition against the hook ends of the garment hangers, said retainer having at one end a tongue projecting through said slot to secure said one end of the retainer against upward retraction from said one bracket, and means for securing the retainer to the member remote from said one bracket and cooperating

with said tongue and said one bracket to hold the retainer and member in assembled relationship.

2. A hanger support bar according to claim 1 in which said brackets have prongs for embedment in the opposed walls of the garment packaging case to prevent shifting of the bar when it is assembled with said case.

3. A hanger support bar for a garment packing case, said support bar comprising inverted U-shaped end brackets for embracing the upper ends of opposed walls of the packing case, each bracket having a bight with prongs for embedment in said wall upper ends to prevent shifting of the support bar thereon after assembly with the packing case, a member spanning the space between the brackets and being rigidly secured to each and having a top for receiving and supporting the hook ends of garment hangers, a retainer overlying the top of the member for disposition against the hook ends of the garment hangers, said retainer having at one end a tongue interfitting with a part of one bracket in a manner to secure said one end of the retainer against upward retraction from said one bracket, and spring band means overlying the retainer and releasably embracing the member and cooperating with said tongue and said one bracket to hold the retainer and member in assembled relationship.

4. A hanger support bar for a garment packing case, said support bar comprising inverted U-shaped end brackets for embracing the upper ends of opposed walls of the packing case, each bracket having spaced legs joined by a bight; prongs on said brackets between the legs thereof for embedment in said upper ends to prevent shifting of said support bar thereon after assembly therewith, said prongs being struck from the bights of the brackets, and a member spanning the space between the brackets and adapted to support the hook ends of garment hangers, the ends of said member being secured to the brackets.

5. In a garment packing case, a body having opposed walls with top flaps, the top flaps being folded against the walls to form multiple thickness wall top portions, means forming a top closure for the body, the combination with a hanger support bar underlying the top closure, said bar having a member engageable by the hook ends of garment hangers, and inverted U-shaped end brackets at the ends of said member embracing the multiple thickness wall portions and supporting the top of said member inwardly of the top edges of said opposed walls, the bights of said brackets having prongs struck therefrom embedded in said wall top portions and gripping the same to prevent shifting of either bracket along its associated wall top portion upon assembly of the bar with said body.

6. In a garment packing case, a body having opposed walls with top flaps, the top flaps being folded against the walls to form multiple thickness wall top portions, means forming a top closure for the body, the combination with a hanger support bar underlying the top closure, said bar having a member engageable by the hook ends of garment hangers, inverted U-shaped end brackets at the ends of said member embracing the multiple thickness wall portions and supporting the top of said member inwardly of the top edges of said opposed walls, the bights of said brackets having prongs struck therefrom embedded in said wall top portions and gripping the same to prevent shifting of either bracket along its associated wall top portion upon assembly of the bar with said body, one of said brackets having a slot above the member and opening toward the other bracket, a hanger retainer for overlying the top of the member and engaging the garment hooks thereon, said retainer having a tongue that projects through said slot and underlies part of said one bracket to prevent upward retraction of that end of the retainer from the member, and a clamping means embracing the retainer and member and cooperating with the tongue and said part of said one bracket to clamp the hooked ends of the garment hangers between the retainer and member.

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7. In a garment packing case, a body having opposed walls with top flaps, the top flaps being folded against the walls to form multiple thickness wall top portions, means forming a top closure for the body, the combination with a hanger support bar underlying the top closure, said bar having a member engageable by the hook ends of garment hangers, inverted U-shaped end brackets at the ends of said member embracing the multiple thickness wall portions and supporting the top of said member inwardly of the top edges of said opposed walls, one of said brackets having a slot above the member and opening toward the other bracket, a hanger retainer for overlying the top of the member and engaging the garment hooks thereon, said retainer having a tongue that projects through said slot and lies adjacent to the upper edge of the associated wall portion and also underlies the bight portion of said one bracket to prevent upward retraction of that end of the retainer from the member, and clamping means embracing the retainer and member and cooperating with the tongue and said one bracket to clamp the hooked

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ends of the garment hangers between the retainer and member.

8. A hanger support bar according to claim 7 in which the brackets have prongs for embedment in the upper ends of said walls to prevent shifting of the support bar thereon after assembly with the packing case.

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