United States Patent

[11] 3,613,898

[72] Inventor **Francis P. Brennan**
1057 Rolling Drive, Lisle, Ill. 60532

[21] Appl. No. **2,888**
[22] Filed **Jan. 14, 1970**
[45] Patented **Oct. 19, 1971**

[54] **CAP LOCKING MEANS FOR WARDROBE HANGER BAR**
10 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** ..... **211/124,** 206/7 A
[51] **Int. Cl.** **B65d 85/18**
[50] **Field of Search** ..... 211/124, 123; 206/7 A

[56] **References Cited**
UNITED STATES PATENTS

3,162,314	12/1964	Belsinger	211/124
3,306,465	2/1967	Brennan	211/124
3,403,787	10/1968	Browning	211/124
3,480,153	11/1969	Collin	211/124
3,519,139	7/1970	Brennan	211/124

Primary Examiner—Ramon S. Britts
Attorney—Hill, Sherman, Meroni, Gross & Simpson

ABSTRACT: A portable hanger bar structure for supporting a plurality of various types of garment hangers having an overlying locking member releasably affixed to the bar structure providing a plurality of spaced support areas for the hangers.

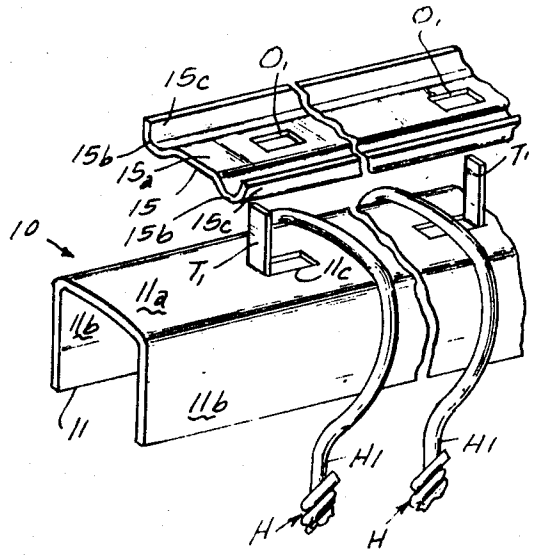
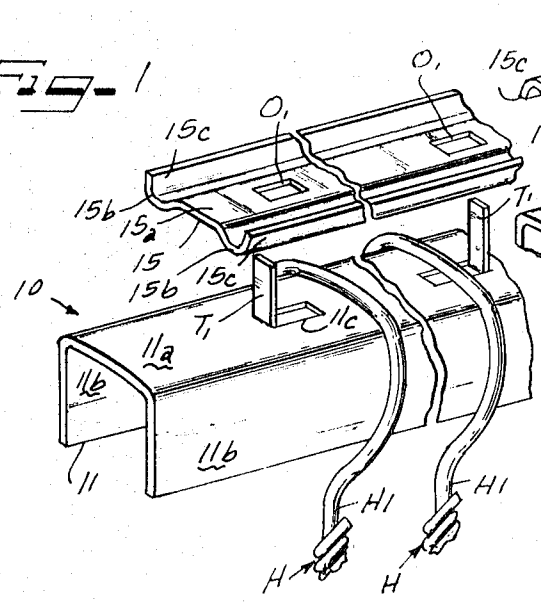


Fig. 1



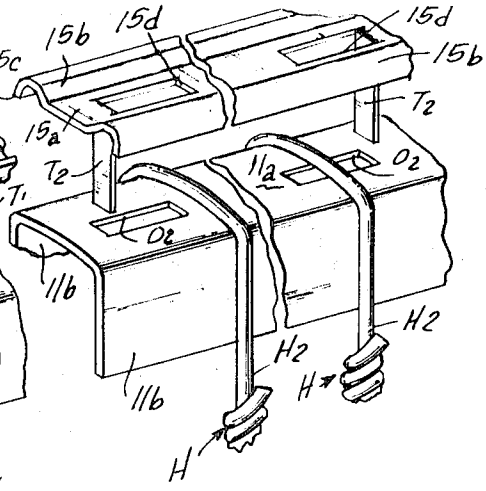


Fig. 2

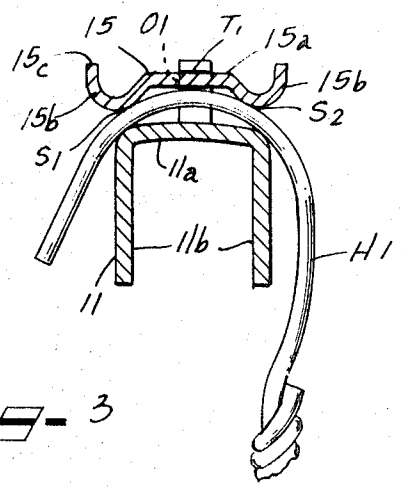


Fig. 3

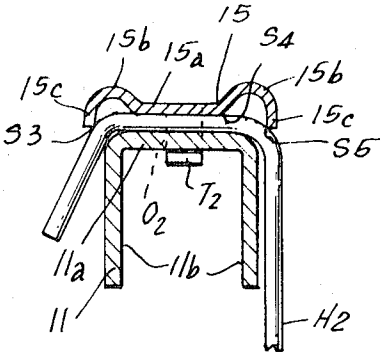


Fig. 4

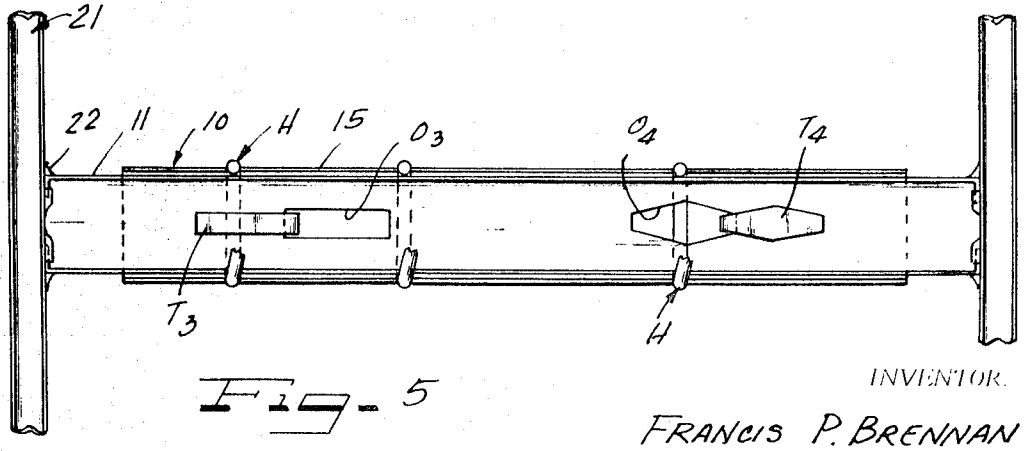


Fig. 5

INVENTOR.
FRANCIS P. BRENNAN

BY Hill, Sherman, Meroni, Gross & Simpson ATTORNEYS

CAP LOCKING MEANS FOR WARDROBE HANGER BAR

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to portable hanger bar structures having means of retaining hangers thereon during transportation and more particularly to a portable hanger bar structure having a means of providing support for different types of hangers.

2. Description of the Prior Art

My prior U.S. Pat. No. 3,306,465, discloses a portable hanger bar structure having a cap locking means associated with a bar supporting a plurality of garment hangers.

SUMMARY OF THE INVENTION

The cap locking means of this invention comprises a generally W-shaped bar providing a pair of spaced-apart abutment surfaces for engaging the curved hooks of a curved coat hanger. A flat abutment surface disposed therebetween can be utilized to engage the flat-type hook of other well-known forms of coat hangers. The cap locking bar is simply inverted selectively for use with either type of hook.

It is an object of the invention to provide a hanger bar construction including a separable novel locking cap convertible for supporting different types of hangers with different support configurations whereby such hangers are securely locked against disengagement and deformation during transportation of the hanger bar.

It is another object of the invention to provide a combination of hanger bar and locking member of economical construction and simplicity in operation.

The organization and manner of operation of the invention, together with further objects and advantages thereof, may be best understood by reference to the following description taken in conjunction with the accompanying drawings, in the several figures of which like reference numerals identify like elements, although variations and modifications may be affected without departing from the spirit and scope of the novel concepts of the disclosure and in which:

ON THE DRAWINGS

FIG. 1 is a fragmentary perspective view of a partially exploded hanger bar structure incorporating the invention with several wire hangers thereon;

FIG. 2 is a view somewhat similar to that illustrated in FIG. 1, illustrating another embodiment of the invention with different type of hangers thereon;

FIG. 3 is a vertical end view of the hanger bar structure illustrated at FIG. 1 in assembled form;

FIG. 4 is a vertical end view of the hanger bar structure illustrated at FIG. 2 in assembled form;

FIG. 5 is an enlarged bottom plane view of the hanger bar structure of the invention in locking position, illustrating various attachment means, with the hangers shown in section, and also illustrating a means of attaching the structure to a support.

AS SHOWN ON THE DRAWINGS

As illustrated in FIG. 1, a novel wardrobe hanger bar structure generally indicated as 10 receives and supports a number of hangers H; the hangers H are conventional wire hangers having a half-round hook portion H1 for attachment to a support.

In accordance with the invention, the hanger bar structure 10 comprises an elongated generally inverted U-shaped carrier member 11 which forms a crossbar support for carrying a plurality of coat hangers H, and an elongated generally W-shaped locking member 15 adapted to lie over the carrier member 11 and provide a plurality of support areas for hangers H on the carrier member as will be explained hereinafter.

The carrier member 11 is, as indicated hereinbefore, an elongated generally inverted U-shaped member having a center wall 11*a* which is adapted to engage hangers and two dependent sidewalls ends 11*b* and 11*b*. The carrier member 11*a* as illustrated at FIG. 1, is provided with space tongues T1 struck-out from the center wall 11*a* and extend upwardly. Preferably, the tongues T1 are provided at either end of the carrier member 11, however, if desired, additional tongue members may be provided.

The locking member 15 is also generally elongated to substantially lie over the carrier member 11, and generally comprised of a W-shaped cross section. Preferably, the locking member 15 extends a substantial portion of the longitudinal extent of carrier member 11 but less than its total length. The locking member 15 has a raised center wall portion 15*a* of a width somewhat less than the width of the carrier member center wall 11*a* and has disposed on opposite sides thereof side channellike portions 15*b*, 15*b* which have peripheral walls 15*c*, 15*c* spaced from the center wall 15*a* and lying in approximately the same plane as the sidewalls 11*b*, 11*b*, of the carrier member 11. In the embodiment shown at FIG. 1, the locking member 15 is provided with a pair of spaced apertures O1, 01 in mating relation with the tongues T1, T1 on carrier member 11.

As illustrated in FIG. 2, the relation between the apertures and the tongues releasably affixing the carrier member 11 with the locking member 15 may be reversed so that the locking member 15 has struckout tongue portion T_2, T_2 while the carrier member has struckout mating aperture O_2, 0_2The plurality of hangers H shown on the carrier bar 11 at FIG. 2 are of more substantial construction having half-square hook portion H2 and thereby differ from the hangers at FIG. 1 which have half-around hook portion H1.

As better illustrated in FIGS. 3 and 4, the mating and interplay between the carrier member 11 and the locking member 15 with the hook portion H_1, and H_2 respectively, is illustrated. The hook H1, and H2 is supported and rides over the outer surface of the U-shaped carrier member 11 with the locking member 15 above the hook and the carrier member 11. The tongue T1, T2 is shown in its closed or locking position, wherein it passes through the aperture 01, 02 of that particular member and extends approximately parallel to the center wall portion of either carrier member 11 or the locking member 15 respectively. It will be noted that the positioning of the locking member 15 as shown at FIG. 3, provides a plurality of space support areas S1 and S2 to the hook H1. The peripheral walls 15*c* of the channellike portion 15*b* are free from contact with the half-round hanger hook H1, while the center wall portion of the channellike portions 15*b* contact the hanger hook H1. Of course, as will be appreciated, a plurality of such half-round hook hangers H1 can be supported along the elongated members 11 and 15.

FIG. 4 illustrates half-square hook hangers H2 supported along spaced support areas S3, S4 and S5. It will be noted that the center wall 15*a* of locking member 15 is formed to provide a portion complementary in shape to a corresponding portion of the carrier member thereby providing full face contact with the hook hanger H2. The peripheral sidewalls 15*c*, 15*c* of the channellike portions 15*b*, 15*b* also contacts the hook portion H2 as shown.

Thus, the locking member 15 of the instant invention is readily convertible to support either half-round or half-square conventional hangers merely by proper positioning to provide the plurality of support areas. Further, the W-shaped cross section of the locking member 15 improves the strength and supporting characteristic whereby a lighter gauge of material may be utilized, if desired. Additionally, by providing the plurality of spaced support areas for a variety of hangers, disengagement and/or deformation of such hanger is further avoided as compared to a means which provide only single support area.

Referring now to FIG. 5, the hanger bar structure 10 is shown supported on a support means 21, such as a conven-

tional corrugated cardboard carton. Preferably, a pair of opposed inverted J-shaped end support members **22** are provided for interconnecting sidewalls of the support means **21** with the carrier member **11**. This type of interconnection is more fully disclosed in my aforesaid U.S. Pat. No. 3,306,465, however, it will be understood, the other interconnecting means may also be utilized, such as members having portions thereof fitting over a support means and having portions thereof extending from the support means to receive the carrier member **11**.

As indicated hereinbefore, the W-shaped locking member **15** has only a slightly larger separation between its outer peripheral sidewalls **15***c*, **15***c*, than between the sidewalls **11***b*, **11***b* of the carrier member **11**. It should be noted that the apertures of **03**, **04** as well as apertures **01**, and **02** may be shaped as circular apertures for economy reasons and may be formed so as to be self-centering in cooperation with the tongues T3, T4. Other geometric shapes can be selected if desired. In this respect, it will be noted that the tongues T3, T4 as well as tongues T1 and T2 may be shaped in any desired or selected geometric shape, for example, rectangular, diamond-shaped, tear-shaped, etc., as long as they fit within the respective mating aperture or opening. The dependent tongue elements are offset angularly between the open position and the locked or closed position wherein the lower portion of such tongue element lies in a plane approximately parallel to the center wall surface of the elements **11** and **15** between the dependent sidewalls and are preferably so struckout as to be bendable toward the respective ends of the members **11** and **15**, as illustrated.

In operation, carrier member **11** is placed on a suitable support means and a plurality of a particular type of hanger H is placed thereon. It will be appreciated that a plurality of carrier members **11** may be provided, wherein each individual carrier member supports a different type of hanger, such as half-round or half-square. Thereafter the locking member **15** is moved into the appropriate position, as determined by the type of hanger onto the carrier member **11** (such as the two positions at FIGS. **1** and **2**) and caused to lie over the carrier member until the tongue and aperture of the respective members are in mating relationship with each other. The tongues are then inserted through the aperture for locking, as by bending the tongues at an acute angle to the vertical until the lie in a substantially parallel plane to the center walls of members **11** and **15**. In this manner a plurality of support areas are provided along the upper portion of the hanger hook supported by carrier member **11** preventing their disengagement of deformation during the transportation of the carrier member **11**. At its destination, the hanger bar locking member **15** is removed by disengaging the tongues from the aperture and lifting the locking member from the carrier member.

As it is now apparent, a new and improved hanger bar construction for transporting different types of garment hangers is provided which prevents disengagement and deformation of the particular hanger support thereon during the transportation thereof The described hanger bar structure is easily operable and is capable of economical construction while being readily adaptable to provide a plurality of support areas for different types of hangers.

I claim as my invention:

1. A hanger bar structure for bearing a plurality of garment hangers comprising:

An elongated generally inverted U-shaped carrier member having a center wall of a width adapted to engage hangers and sidewalls on opposite sides thereof;

an elongated generally W-shaped locking member having a center wall of somewhat lesser width than said carrier member center wall and spaced side channellike portions disposed on opposite sides having peripheral walls spaced from said locking member center wall and lying in approximately the same plane as said carrier member sidewalls, said locking member being adapted to lie over said carrier member and providing a plurality of support areas for hangers on said carrier member; and

means for releasably affixing said locking member to said carrier member to prevent disengagement of the hangers on said carrier member, comprising mating struckout tongues and openings formed between said center wall of said locking member and said carrier member, said tongues being offset to underlie the edges of the opening for affixing said locking member to said carrier member;

the center walls and the peripheral walls of the channellike portions of the W-shaped locking member being dimensioned so as to each contact hangers on the carrier member at spaced locations with the peripheral walls being adapted to contact the hangers within planes lying inwardly of he outer surfaces of the carrier member sidewall.

2. The hanger bar structure as defined in claim **1** wherein the spaced side channellike portions of the generally W-shaped locking member comprise half-round channels.

3. The hanger bar structure as defined in claim **1** wherein said center wall of the locking member is formed to provide a portion complementary in shape to a corresponding portion of said carrier member, thereby to provide full face contact with the adjoining back portions of hangers on the carrier member.

4. The hanger bar structure as defined in claim **1** wherein the center wall of the carrier member is provided with regularly shaped openings spaced near the opposite ends of said carrier member and said locking member is provided with corresponding spaced tongues dependent from the center wall thereof into said spaced openings of said carrier member.

5. The hanger bar structure as defined in claim **1** wherein said openings are provided in the center wall of the locking member spaced near opposite ends of said locking member, said tongues are provided on and said carrier member in correspondingly spaced relation projecting from the center wall hereof into said spaced openings of said locking member.

6. A hanger bar structure for bearing a plurality of garment hangers comprising:

an elongated generally inverted U-shaped carrier member having a center wall of a width adapted to engage hangers and sidewall on opposite sides thereof;

an elongated generally W-shaped locking member having a center wall of somewhat lesser width than said carrier member center wall and spaced side channellike portions disposed on opposite sides having peripheral walls spaced from said locking member center wall and lying in approximately the same plane as said carrier member sidewalls, said locking member being adapted to lie over said carrier member and providing a plurality of support areas for hangers on said carrier member; and

means for releasably affixing said locking member to said carrier member to prevent disengagement of the hangers on said carrier member, comprising mating struckout tongues and openings formed between said center wall of said locking member and said carrier member, respectively, said tongues being offset to underlie the edges of the opening for affixing said locking member to said carrier member;

the center walls and the channellike portions of the W-shaped locking member being dimensioned so as to each contact hangers on the carrier member at spaced locations with the channellike portion being adapted to contact the hangers within planes lying inwardly of the outer surfaces of the carrier member sidewall when said locking member is disposed in a first position with the channel portions engaging the adjacent portion of a curved hook and with the peripheral walls being adapted to contact the hangers within planes lying outwardly of the outer surfaces of the carrier member sidewall when said locking member is disposed in an inverted second position with the peripheral walls engaging the adjoining portion of a flat hook.

7. The hanger bar structure as defined in claim **6** wherein the free edges of the peripheral walls of the channellike portions of the W-shaped locking member extend out of contact with adjoining round back portions of hangers on the carrier member.

8. The hanger bar structure as defined in claim 6 wherein said locking member provides three laterally spaced support areas for hangers on the carrier member, (1) at the center wall portion and(2) and(3), at the respectively opposite channel-like portion.

9. The hanger bar structure as defined in claim 6 wherein the carrier member is provided with means at opposite ends thereof for mounting said member on a support.

10. The hanger bar structure as defined in claim 6 and said means for releasably affixing said locking member to said carrier member to prevent disengagement on said carrier member comprising mating struckout tongues and openings of a shape so that the parts will be self-centering in cooperation with one another, said tongues being offset to underlie the edges of the openings for affixing said locking member to said carrier member.

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,613,898 Dated October 19, 1971

Inventor(s) Francis P. Brennan

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 3, line 6, "the" should read --that--;
line 15, cancel "of";
line 44, "the" should read --they--.

Column 4,

line 13, "he" should read --the--;
line 27, "responding" should read --respondingly--;
line 34, "hereof" should read --thereof--;
line 39, "sidewall" should read --side walls--.

Column 5, line 5, "portion" should read --portions--.

Signed and sealed this 27th day of June 1972.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

ROBERT GOTTSCHALK
Commissioner of Patents

M PO-1050 (10-69)

USCOMM-DC 60376-P69
* U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334