

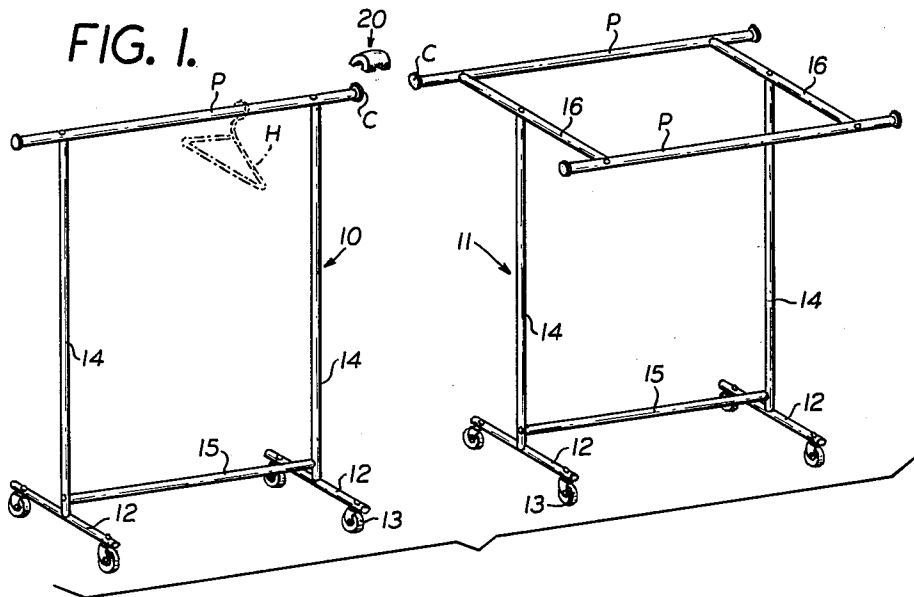
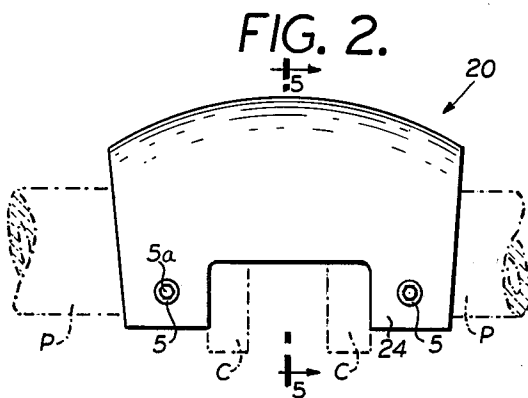
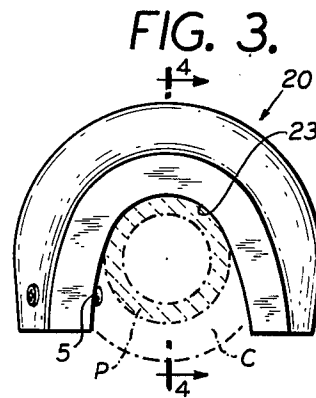
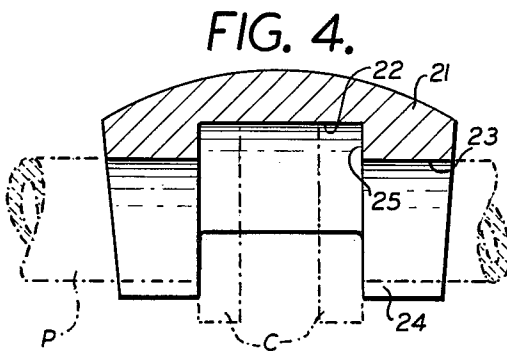
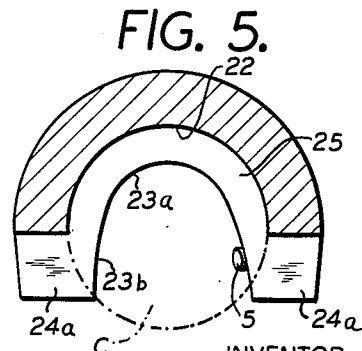
June 4, 1963

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3,092,408

CONNECTION MEMBER FOR DISPLAY RACKS

Filed Jan. 22, 1962



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3,092,408

CONNECTION MEMBER FOR DISPLAY RACKS

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Filed Jan. 22, 1962, Ser. No. 167,861

3 Claims. (Cl. 287—113)

This invention relates to an improved connection member for garment display racks.

It is common practice in the merchandising of garments to display them in retail stores on relatively large pipe racks. Such a rack is normally elongated and consists of pipes fabricated to form a frame including one or more top pipes which extend longitudinally. The frame is generally mounted upon casters so as to be mobile. The open ends of the top pipes are normally closed by decorative end caps of enlarged diameter. Garments may be supported by hangers from the top longitudinally extending pipes of these racks.

It is common practice in stores to arrange the racks in longitudinal rows. For orderly display, it is desirable that successive racks of a row be aligned and positioned adjacent each other.

Such racks, when loaded with clothes, are quite heavy and are difficult to move about. In the course of a busy shopping day, the racks are often moved out of alignment. It then becomes a relatively difficult job to realign the racks in preparation for the next day's business.

An important object of this invention is to provide a connection member for the top longitudinal pipes of such garment racks, whereby to insure that they will be maintained in the proper longitudinal alignment and in the proper adjacent positions in each longitudinal row.

Another object of this invention is to provide a connection member which is economical to manufacture, sturdy and relatively inconspicuous in appearance.

Another object of the invention is to provide a connection member of the above-described type which optionally may be mounted in place without the use of any tools at all, but which may be releasably secured in place, for greater security, if desired, by means of a simple tool.

In accordance with a preferred embodiment of the invention, the connection member comprises a heavy, cast metal, longitudinally extending body having a peripheral wall of greater diameter than the end caps. The body has a downwardly opening semi-cylindrical central recess of approximately the same diameter as the end caps and of length greater than the combined length of the end caps of the two pipes which are to be connected. The body also has downwardly opening end recesses extending to the ends thereof, coaxial with said central recess and extending to and communicating therewith. The diameter of the end recesses is less than the diameter of the central recess. Each end recess has an upper semi-cylindrical portion of approximately the same diameter as the pipes. The peripheral wall of each end recess extends below the peripheral wall of the central recess, with the recess in the extended end recess peripheral wall increasing in width.

Since the member is open at the bottom, it may be dropped down on top of aligned pipes with the end caps located in the central recess and with the peripheral wall of the central recess resting conformingly on the end caps. The respective pipes extend through the respective end recesses with the peripheral walls of the end recesses resting conformingly on the end pipes. The end recess peripheral walls extend below the pipes.

Because of the relative weight of the connecting member, and because of the manner in which its shape conforms to the shape of the pipes and end caps, the con-

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nection member can optionally be retained in place without the provision of any fastening means. The transverse shoulders formed at the junctions between the end recesses and the central recess serve as stops to prevent longitudinal separation of the caps. In addition, the connection member permits only extremely limited lateral play of one pipe relative to the other.

Optionally, the body has, preferably on one side thereof, radial screw threaded bores extending through the respective end recess peripheral walls below the horizontal diameter lines of the pipes and above the bottoms of the pipes. Set screws are screwed into the bores and are retractably screwable into engagement against the pipes to prevent the member from being lifted from the pipes. It will be apparent that these set screws are extremely simple to manipulate. In addition to the fact that the set screws retain the connecting member more securely upon the pipes, the set screws also prevent pilferage of the member.

Other objects and advantages of the invention will become apparent from the following description, in conjunction with the annexed drawing, in which preferred embodiments of the invention are disclosed.

In the drawing:

FIG. 1 is an exploded perspective view showing garment racks and a connecting member in accordance with this invention.

FIG. 2 is a side elevation of the connection member, showing it securing two pipes, which are shown in phantom view.

FIG. 3 is an end view of the connection member, showing one of the pipes and end caps in phantom, the pipe being shown sectionally.

FIG. 4 is a section on line 4—4 of FIG. 3, the pipes and end caps being shown in phantom view.

FIG. 5 is a section on line 5—5 of FIG. 2, one of the end caps being shown in phantom view.

Upon reference of the drawing in detail, it will be noted that it shows in FIG. 1 a connection member 20 used to connect garment racks 10 and 11. For economy of illustration, the connection member 20 is shown as in position to connect two different garment racks 10 and 11, but it will be apparent that ordinarily, either a row of like garment racks 10, or a row of like garment racks 11, will be connected by the connection member 20.

The garment racks 10 and 11 are conventional and will not be described in detail. Each of these racks includes lateral lower pipes 12 supported at their outer ends on casters 13. Vertical pipes 14 are connected centrally to the pipes 12 and extend upwardly therefrom in longitudinal alignment. Also in each rack 10 and 11, the vertical pipes 14 are connected near their lower ends by a longitudinal pipe 15.

In rack 10, a single longitudinally extending pipe P is connected to the upper ends of pipes 14 and extends longitudinally forwardly and rearwardly of the pipes 14. In rack 11, lateral pipes 16 are connected at their centers to the tops of pipes 14. Longitudinally extending pipes P are connected to the respective ends of the pipes 16 and extend longitudinally forwardly and rearwardly thereof.

The pipes P serve as the means for supporting garments, for example by means of conventional hangers H, such as shown in phantom in FIG. 1.

In accordance with common practice, garment racks 10 or 11 are placed in longitudinal succession with respective pipes P thereof in longitudinal alignment. In accordance with the invention, the connection member 20 serves as simple means for connecting the successive pipes P and maintaining them in longitudinal alignment and in the desired spacing.

Each pipe P is cylindrical and has end caps C of enlarged diameter. Said caps C are secured to the pipes P by any suitable means (conventional and not shown). The cap C is coaxial with pipe P and for purposes of the invention may be considered to be generally cylindrical in shape. It will be apparent, however, that the shape of cap C may be varied for ornamental effects, as by rounding the ends thereof; and it is still possible to apply the connection member in accordance with the invention.

The connection member 20 includes a body 21 and set screws 5. Said body 21 is preferably relatively heavy and may be made of cast metal, such as iron. It is longitudinally elongated and has a peripheral wall of greater diameter than the end cap C.

Body 21 has downwardly opening semi-cylindrical central recess 22 of approximately the same diameter as end caps C and of length greater than the combined length of said end caps C. The excess in length of recess 22 is advantageous in the event that it is to be used with end caps of slightly varying lengths.

Body 21 also has downwardly opening end recesses 23 extending to the ends thereof and coaxial with central recess 22. Said recesses 23 extend to central recess 22 and communicate therewith. The diameter of each end recess 23 is less than the diameter of central recess 22. Each end recess 23 has an upper semi-cylindrical portion 23a of approximately the same diameter as the pipes P. The peripheral wall portion 24 of each end recess 23 extends below the peripheral wall of the central recess 22, and the recess 23b in the extended end recess peripheral wall 24 increases slightly in width in the downward direction.

The central recess 22 has transverse end surfaces so as to define respective transverse shoulders 25 at the respective junctions between central recess 22 and the end recesses 23. Each shoulder 25 is coplanar with and merges with respective inner end surfaces 24a of a respective peripheral wall extension 24.

The outer surface of body 21 is convex in vertical cross section, as shown in FIGS. 3 and 5. In addition, the top of body 21 is preferably somewhat convex in vertical longitudinal section, as shown in FIG. 2. Also, as shown in FIGS. 2 and 3, each outer side surface of body 21 is slightly convex in horizontal longitudinal section. Optionally, as shown in FIGS. 2 and 4, the outer end faces of body 21 are slightly downwardly inclined toward each other.

In assembly, a pair of racks 10 or racks 11 (or conceivably one of each) are arranged with the respective pipes P of respective racks in longitudinal alignment and with respective end caps C thereof opposing each other and adjacent each other, as clearly shown in phantom view in FIGS. 2 and 4. Connecting member 20 may then be dropped downwardly over pipes P and caps C received within central recess 22. The peripheral surface of central recess 22 then rests conformingly upon the end caps C. Pipes P extend through the respective end recesses 23 with the upper peripheral surfaces of the end recesses resting conformingly on the respective pipes P. In view of the relative weight of the connection member, and in view of the clearly defined shoulders 25, the connection member prevents separation of the pipes P beyond the limits shown in phantom in FIGS. 2 and 4. In addition, in view of the conforming fit of the connection member to the pipes and end caps, very little lateral play of one pipe relative to another is possible, so that the connection member retains the pipes P substantially in longitudinal alignment.

For additional security, to prevent accidental separation of the pipes, and additionally to minimize the risk of pilferage, simple fastening means may be provided in order to lock the connection member 20 releasably in place. The end recess peripheral wall extensions 24 extend below the level of pipes P. Preferably on one side of body 21, radially extending screw-threaded through

bore are formed therein below the horizontal diameter lines of pipes P and above the bottoms thereof. A set screw 5 is screwed into each of the respective radial bores and is retractably screwable into engagement against a respective pipe P as clearly shown in FIG. 3, the engagement of the set screw with the pipe P being below its horizontal diameter line. As a result, the provision of the set screws prevents the member from being lifted from the pipes.

Each set screw 5 has a hexagonal outer end recess 5a to permit it to be manipulated by a conventional Allen wrench.

It is advantageous to locate the set screws on one side of body 21, for use in conjunction with garment racks 11 having a pair of pipes P. In that way, the connection member may be oriented relative to each pipe with the set screws extending outwardly into the aisle for easy accessibility thereof.

While I have disclosed a preferred embodiment of the invention, and have indicated various changes, omissions and additions which may be made therein, it will be apparent that various other changes, omissions and additions may be made in the invention without departing from the scope and spirit thereof.

What is claimed is:

1. Member for releasably connecting longitudinally extending and aligned cylindrical horizontal pipes of movable garment racks and the like so as to maintain the racks in alignment, said pipes having coaxial end caps of enlarged diameter, said member comprising a heavy cast metal longitudinally extending body having a peripheral wall of greater diameter than said end caps, said body having a downwardly opening semi-cylindrical central recess of approximately the same diameter as said end caps and of length greater than the combined length of said end caps, said body having downwardly opening end recesses extending to the ends thereof and coaxial with said central recess and extending to and communicating therewith, the diameter of said end recesses being less than the diameter of said central recess, each end recess having an upper semi-cylindrical portion of approximately the same diameter as said pipes, the peripheral wall of each end recess extending below the peripheral wall of said central recess and said end recesses increasing in width in a downward direction, said member connecting said pipes with said end caps in said central recess and the peripheral wall thereof resting conformingly on said end caps, and with said pipes extending through said end recesses and the peripheral walls thereof resting conformingly on said pipes, said end recess peripheral walls extending below said pipes, said body having on one side thereof radial screw-threaded bores extending through the respective end recess peripheral wall below the horizontal diameter lines of said pipes and above the bottoms of said pipes, said member also comprising set screws screwed into said bores and retractably screwable into engagement against said pipes to prevent said member from being lifted from said pipes.

2. Member in accordance with claim 1, said member having transverse shoulders at the respective junctions between said central recess and said end recesses, each said shoulder being coplanar with and merging with a respective inner end surface of respective end recess peripheral wall extension.

3. Member according to claim 2, the upper outer surface of said body being longitudinally convex, each outer side surface of said body being longitudinally convex.

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