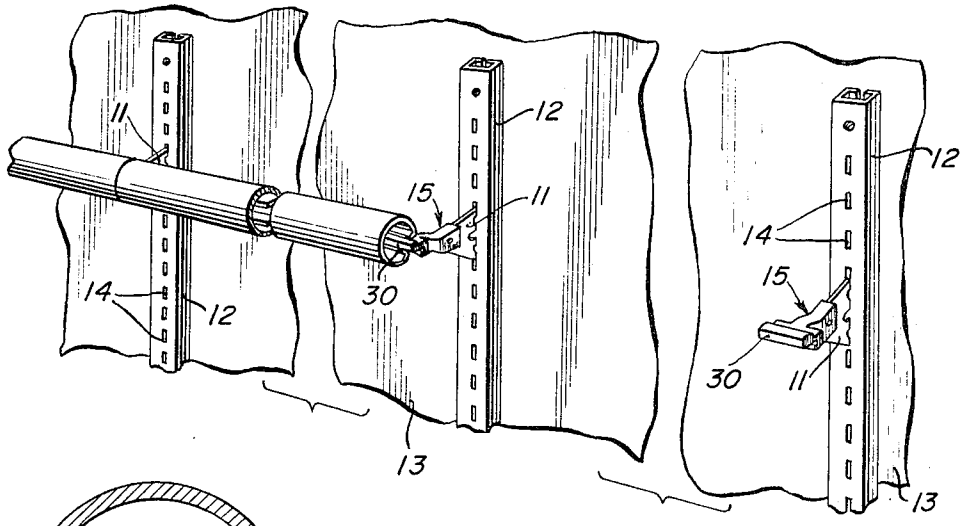
Nov. 1, 1966 R. R. RUHNKE 3,282,548

HANG ROD ASSEMBLY

Filed Dec. 3, 1964

Fig. 1



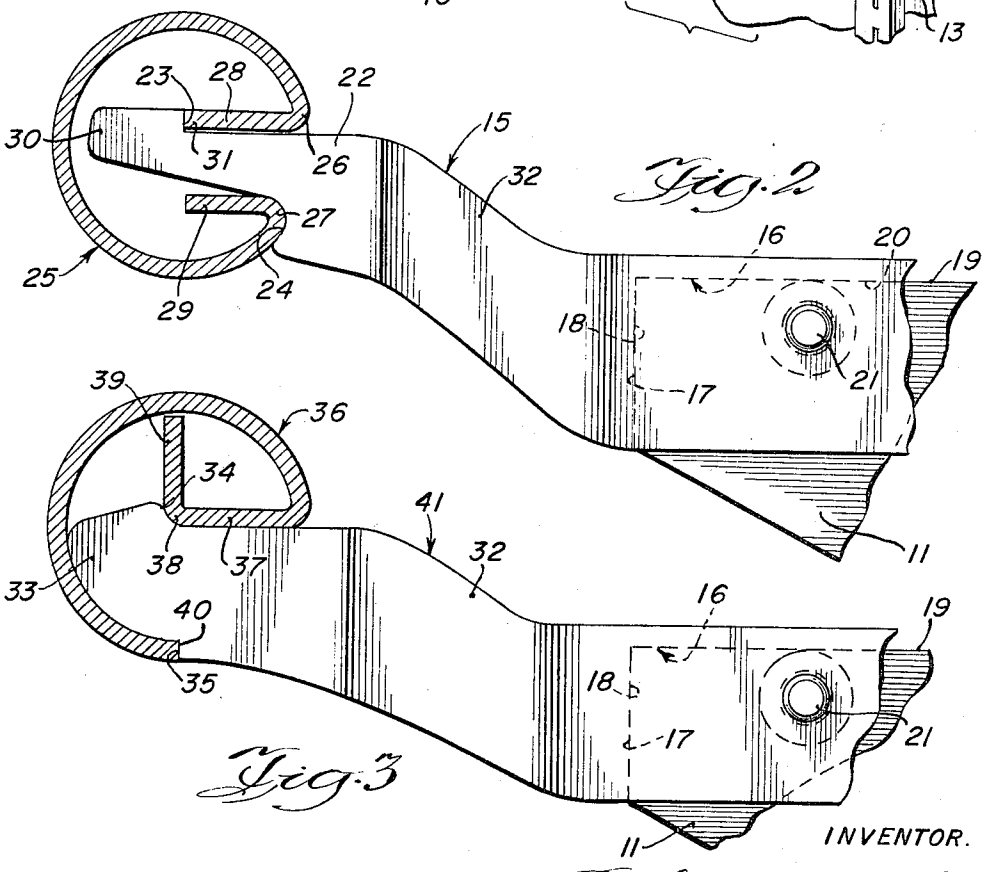


Fig. 2

Fig. 3

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United States Patent Office

3,282,548

Patented Nov. 1, 1966

3,282,548

HANG ROD ASSEMBLY

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Filed Dec. 3, 1964, Ser. No. 415,750
5 Claims. (Cl. 248—243)

This invention relates to a hang rod assembly, and is particularly concerned with an adapter secured to a support bracket with its outer end extending horizontally from the support bracket and shaped for interlocking engagement with a tubular hang rod.

The adapter is secured to the outer end portion of a support bracket by screws or any other suitable fastening means. The outer end of the adapter is provided with a shoulder on its upper surface and on its lower surface. The shoulders face in opposite directions and one of them facilitates proper positioning of the hang rod on the adapter. The other shoulder prevents accidental displacement of the hang rod after it has been positioned on the adapter.

The hang rod is tubular and is secured to the adapter by placing it against the outer end of the adapter and pressing it inwardly against the end of the adapter. The hang rod has sufficient resilience so that a portion of it is forced over the shoulder facing inwardly of the adapter. At the same time another portion of the hang rod contacts the shoulder facing outwardly of the adapter. This last mentioned shoulder serves a dual function in the assembly. In addition to helping position the hang rod properly relative to the adapter, it prevents distortion of the hang rod under heavy load.

The structure by means of which the above mentioned and other advantages of the invention are attained is fully described in the following specification, taken in conjunction with the accompanying drawings showing two preferred illustrative embodiments of the invention, in which:

FIGURE 1 is a fragmentary perspective view of a hang rod installation embodying the invention;

FIG. 2 is an enlarged fragmentary view, partly in section and partly in elevation, of the embodiment of FIG. 1; and

FIG. 3 is a view, similar to FIG. 2 of another embodiment of the invention.

Referring to FIG. 1 of the drawings, a plurality of support brackets **11** are mounted on pilasters **12** secured in upright position to the front of a wall or partition **13**. Each support bracket comprises a flat metal strip having one end detachably anchored in vertically spaced slots **14** in the front wall of each pilaster. The support brackets are of uniform size, and their outer ends are in transverse alignment when they are secured to the pilasters.

In FIG. 2, an adapter **15** is provided with a shallow recess **16** adjacent its inner end shaped to conform to the shape of the outer end of support bracket **11**. The adapter is positioned with its recessed portion juxtaposed against the outer end portion of the support bracket. The outer end **17** of the support bracket abuts a shoulder **18** at the front edge of recess **16**, and the outermost portion of the upper edge **19** of the support bracket abuts another shoulder **20** at the upper edge of recess **16**. The butting engagement of shoulders **18** and **20** with end **17** and edge **19** of the support bracket insures proper positioning of the adapter relative to the support bracket. The adapter is secured to the support bracket by screws **21** or any other suitable fastening means. The outer end portion **22** of adapter **15** extends outwardly from the support bracket in a horizontal direction. Outer end portion **22** has two shoulders **23** and **24** facing in opposite directions. Shoulder **23**, on the top of the adapter, faces inwardly toward the support bracket, and shoulder **24**, on

the lower surface of the outer end portion of the adapter, faces outwardly. If desired, shoulder **23** may be located on the lower surface of the adapter, and shoulder **24** may be on the top. The surface of shoulder **24** adapted to be engaged by part of a tubular hang rod **25** is shown as being curved to conform to the curvature of the portion of the hang rod that abuts against the shoulder, but it will be understood that the surface of shoulder **24** may be flat, or may have any suitable contour.

Hang rod **25** may be extruded, but preferably is formed by rolling the center portion of a metal strip into substantially cylindrical shape, and bending the longitudinal edges reversely inwardly of the cylindrical portion, as indicated at **26** and **27** to form two parallel walls **28** and **29**. Hang rod **25** may have any desired tubular cross section. Walls **28** and **29** are spaced apart to engage the upper and lower surfaces of the outer end **30** of the adapter. These walls have some resilience because of the shape of the hang rod, regardless of the material of which the hang rod is made.

The hang rod may be positioned by sliding it from one end of the adapter, but is generally forced into place. Walls **28** and **29** are engaged with the outer end **30** of the adapter, and the hang rod is then pressed into place. Pressure exerted inwardly against the tubular hang rod moves wall **28** over the top of the adapter, and moves wall **29** along the lower surface of the adapter. The curved portion **27** of hang rod **25** butts against shoulder **24** at the same time the free end **31** of wall **28** moves past shoulder **23**. The hang rod has sufficient resiliency to cause wall **28** to snap into place.

The engagement of the hang rod with shoulders **23** and **24** prevents accidental displacement of the hang rod from the adapter in any direction transverse of the longitudinal axis of the hang rod. Even a heavy load applied to the hang rod will not deform it. The intermediate portion **32** of the adapter extends upwardly and outwardly from the outer end of the support bracket to space the top surface of the hang rod above the plane of the upper edge **19** of the support bracket. Intermediate portion **32** of the adapter is so shaped that when loaded garment hangers are slid along the hang rod, the hooks of said garment hangers cannot engage either said intermediate portion of the adapter or any part of the support brackets. Therefore the garment hangers may be slid freely along the length of the hang rod without any interference.

The inner end structure of the adapter **41**, shown in FIG. 3, is the same as the inner end structure of adapter **15**. Identical structure will be designated by the same reference numerals, and the description of such structure will not be repeated. Outer end portion **33** of adapter **41** is curved upwardly a short distance to form a shoulder **34** facing inwardly. The lower surface of outer end portion **33** is recessed throughout the width of the adapter to form a shoulder **35** facing outwardly.

Adapter **41** is particularly designed to receive a tubular hang rod **36** that has an outer peripheral surface consituting approximately three-fourths of a cylinder. Hang rod **36** is preferably rolled from one longitudinal edge of a metal strip for about three-fourths of the circumference of a cylinder. The other longitudinal edge portion of the metal strip is bent along two parallel longitudinal lines to form two walls **37** and **39** with a right angle corner **38** between them. Wall **37** extends inwardly from the periphery of the cylinder, and wall **39** extends from approximately the center of the cylinder to a point closely adjacent the inner surface of the cylindrical wall. Wall **37** is spaced from the longitudinal edge of the cylindrical portion of the hang rod a distance approximately equal to the height of the adapter adjacent is outer end portion **33**.

Hang rod **36** may be mounted on adapter **41** by sliding it from one end of the adapter, or it may be forced

into place. Edge 40 of the hang rod may be placed against shoulder 35, and the hang rod may be rotated pivotally about shoulder 35 until corner 38 is snapped into place behind shoulder 34. The hang rod has sufficient resilience to permit a slight spreading between edge 40 and corner 38 to facilitate mounting the hang rod on the outer end of the adapter. The engagement of corner 38 with shoulder 34 and of edge 40 with shoulder 35 prevents accidental displacement of the hang rod from the adapter in any direction transverse of the longitudinal axis of the hang rod.

Hang rod 36 will support a plurality of loaded garment hangers so that they can be slid freely along the length of the hang rod without interference, just as in the case of hang rod 25. Wall 39 serves to prevent deformation of hang rod 36 under heavy load, without impairing the resilience of the hang rod.

Although I have described two preferred embodiments of the invention in considerable detail, it will be understood that the description thereof is intended to be illustrative, rather than restrictive, as many details of structure may be modified or changed without departing from the spirit or scope of the invention. Accordingly, I do not desire to be restricted to the exact structure described.

I claim:

1. A hang rod assembly comprising an adapter and a tubular hang rod having an opening into which one end portion of said adapter extends, said hang rod being mounted on said one end portion of said adapter, said one end portion having shoulders facing in opposite directions, said tubular hang rod having a portion extending inwardly of its periphery and engageable with one of said shoulders to prevent accidental displacement of said hang rod from said adapter in one direction transverse of the longitudinal axis of said tubular hang rod and a second portion engageable with said other shoulder to prevent accidental displacement of said hang rod from said adapter in the opposite direction.

2. A hang rod assembly comprising an adapter and a tubular hang rod having an opening into which one end portion of said adapter extends, said hang rod being mounted on said one end portion of said adapter, said one end portion having shoulders on its upper and lower surfaces, said shoulders facing in opposite directions, said tubular hang rod having one portion engageable with one of said shoulders to facilitate positioning said tubular hang rod on said end portion, and having a second portion engageable with said other shoulder to prevent accidental displacement of said hang rod from said adapter in any direction transverse of the longitudinal axis of said tubular hang rod.

3. A hang rod assembly comprising an adapter and a tubular hang rod, said adapter having a horizontally disposed end portion and a shoulder projecting vertically

from said end portion, said tubular hang rod having two vertically spaced walls defining a slot and extending inwardly from its outer surface and in engagement with opposite surfaces of said end portion, one of said vertically spaced walls having a free end abutting said shoulder to hold said hang rod against accidental displacement from said adapter in any direction transverse of the longitudinal axis of said hang rod.

4. A hang rod assembly comprising an adapter and a tubular hang rod, said adapter having a horizontally disposed end portion and a shoulder projecting vertically from the upper and lower surfaces of said end portion, said tubular hang rod having two vertically spaced walls defining a slot and extending inwardly from its outer surface and in engagement with opposite surfaces of said end portion, said hang rod engaging one of said shoulders, one of said vertically spaced walls having a free end abutting said other shoulder to hold said hang rod against accidental displacement from said adapter in any direction transverse of the longitudinal axis of said hang rod.

5. A hang rod assembly comprising an adapter and a tubular hang rod with a slot therein, said adapter having a horizontally disposed end portion having a shoulder on its lower surface facing in one direction and a second shoulder on its upper surface facing in the opposite direction, said tubular hang rod having a portion adjacent said slot engageable with one of said shoulders to facilitate positioning said tubular hang rod on said horizontally disposed end portion, said tubular hang rod having a resilient wall extending inwardly of the slot and adapted to be moved over said other shoulder as said first mentioned hang rod portion is moved into engagement with said first mentioned shoulder, the free end of said resilient wall being adapted to snap into position in abutting engagement with said last mentioned shoulder as it passes over it, said abutting engagement of the free end of said wall and said last mentioned shoulder preventing accidental displacement of said tubular hang rod from said adapter in any direction transverse of the longitudinal axis of said tubular hang rod.

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