Nov. 22, 1966 R. R. RUHNKE 3,286,850

HANG ROD ASSEMBLY

Filed Nov. 16, 1964 2 Sheets-Sheet 1

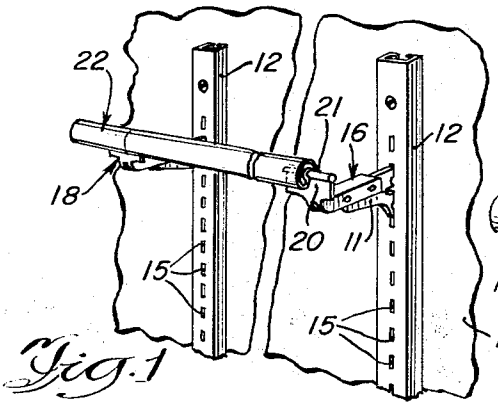


Fig. 1

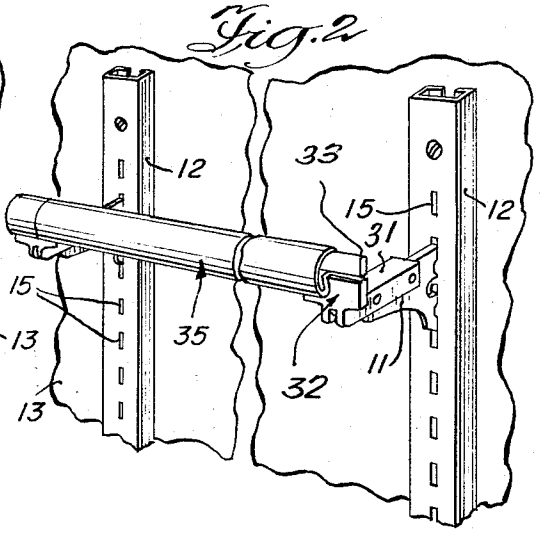


Fig. 2

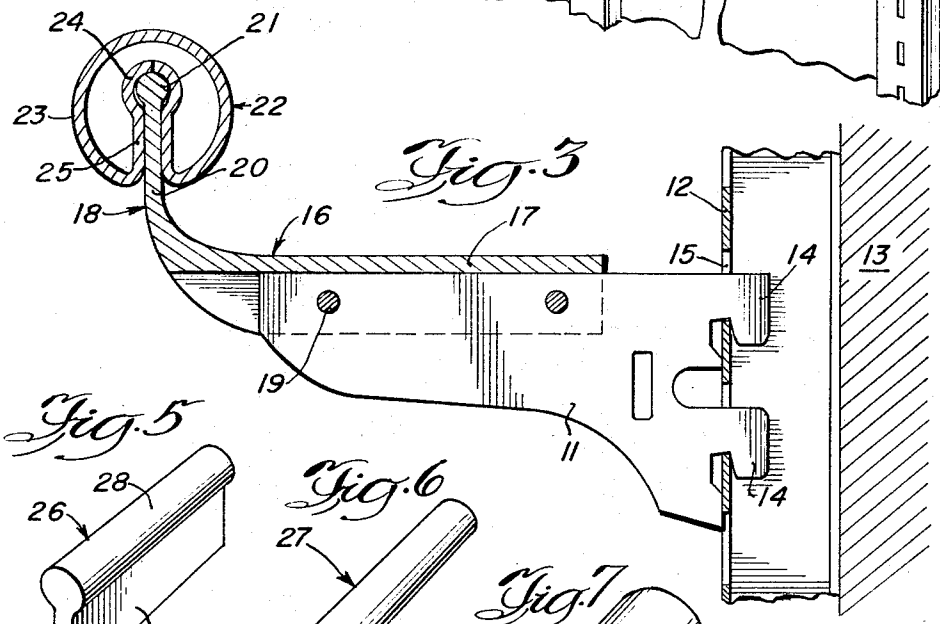


Fig. 3

Fig. 5

Fig. 6

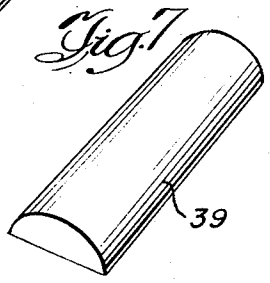
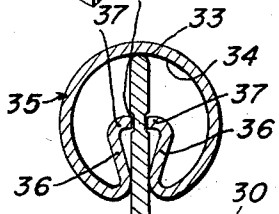


Fig. 7



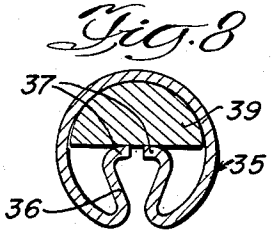


Fig. 8

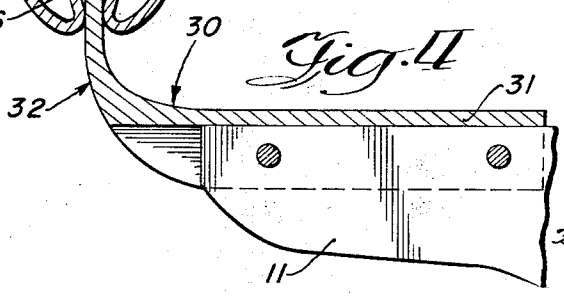


Fig. 11

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HANG ROD ASSEMBLY

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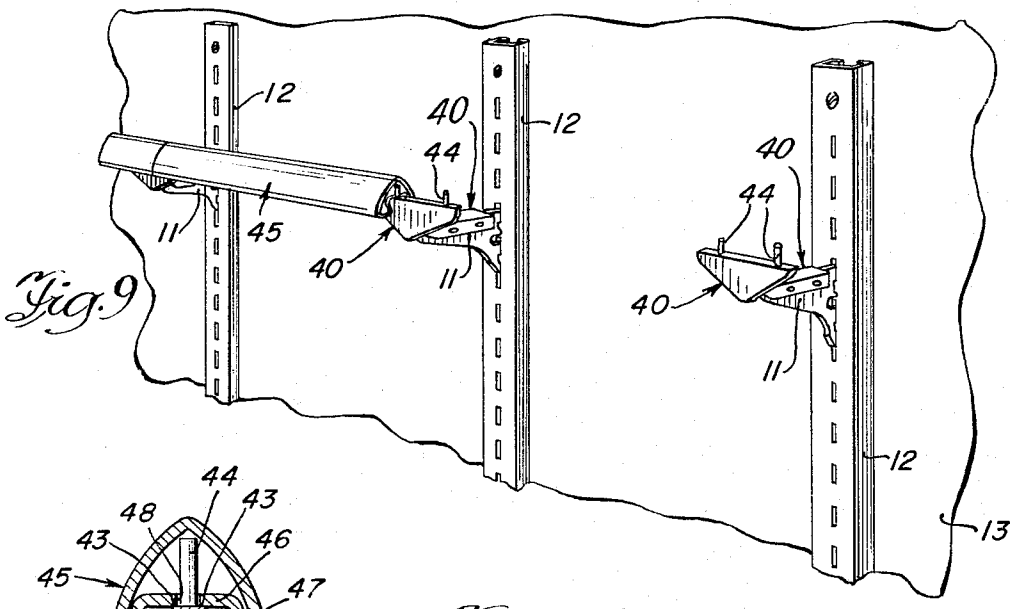


Fig. 9

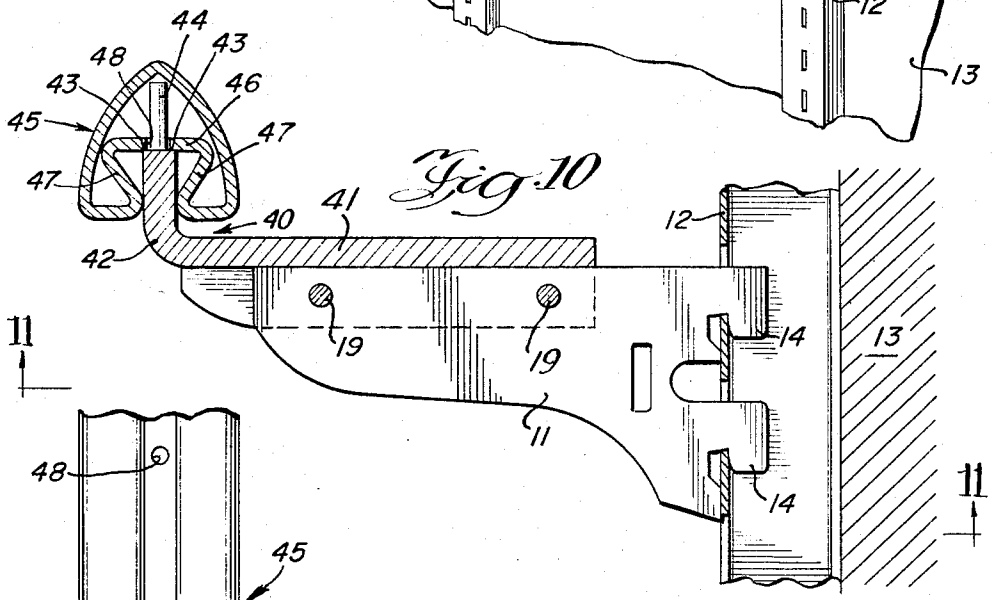


Fig. 10

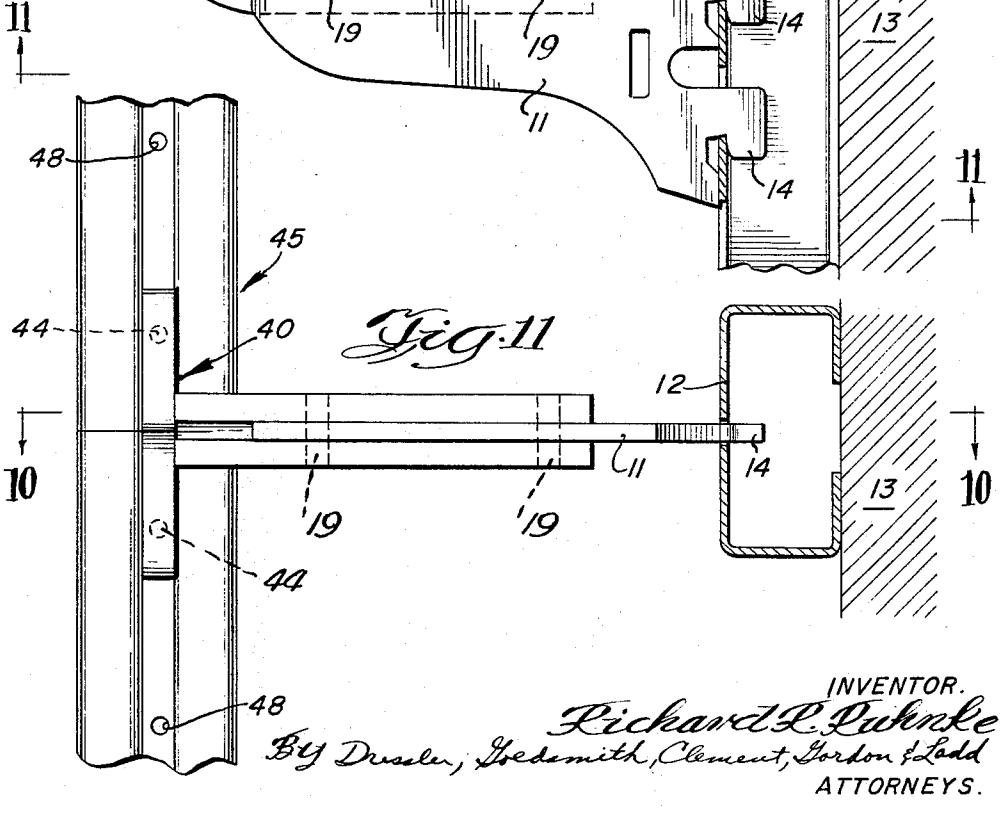


Fig. 11

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3,286,850

HANG ROD ASSEMBLY

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6 Claims. (Cl. 211—105.1)

This invention relates to a hang rod assembly, and is particularly concerned with an adapter that may be readily secured to a conventional support bracket and has a support surface engageable with interior portions of a hang rod to support it in suspended position.

The adapter, which is preferably in the form of a casting, comprises a base member and an upstanding support member extending transversely of the base member at the outer end of the base member. The base member is secured to the outer end portion of a support bracket by screws, or in any other suitable manner.

The hang rod is tubular and has an interior portion thereof shaped to rest on a support surface on the upper edge of the support member. The hang rod may be fabricated in any suitable manner, but is preferably formed into tubular shape by rolling flat strip material, and then bending the longitudinal edges of the strip reversely to form walls that extend inwardly of the tubular portion. The walls are shaped to engage opposite surfaces of the support member in spaced relationship to the support surface from which the hang rod is suspended, to stabilize the support of the hang rod.

A plurality of hang rods may be mounted on a series of axially aligned adapters in end to end relationship to provide an installation of any desired length. When the ends of the hang rods meet on the adapters in an installation of this type, the adapters hold the ends firmly in place, and no splice bars are required. If the joint between the meeting ends of two hang rods is at a point spaced from the adapters, splice bars shaped to conform to a portion of the inner cross-sectional configuration of the hang rod are used. A splice bar is inserted into the adjacent ends of two adjoining hang rods to reinforce the joint between the hang rods, and hold both of them against displacement in any transverse direction.

When a hang rod is mounted on the adapters, its upper surface, upon which a plurality of garment hangers are to be supported, is smooth, and is spaced above the adapter far enough so that the garment hangers may slide freely over the upper surface of the hang rods without interference from the support bracket or any portion of the adapter.

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 three preferred illustrative embodiments of the invention, in which:

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

FIGURE 2 is a view, similar to FIGURE 1, showing a different embodiment of the hang rod;

FIGURE 3 is an enlarged fragmentary cross-sectional view showing the hang rod assembly of FIGURE 1;

FIGURE 4 is an enlarged fragmentary cross-sectional view of the hang rod assembly of FIGURE 2;

FIGURE 5 is a detail perspective view of one form of a splice bar particularly adapted for use with the hang rod of FIGURE 3;

FIGURE 6 is a detail perspective view of another form of splice bar particularly adapted for use with the hang rod of FIGURE 3;

FIGURE 7 is a detail perspective view of another form of splice bar particularly adapted for use with the hang rod of FIGURE 4;

FIGURE 8 is a cross-sectional view of the hang rod of FIGURE 4 with the splice bar of FIGURE 7 inserted therein;

FIGURE 9 is a fragmentary perspective view of an elongated hang rod installation showing another embodiment of the hang rod, with parts omitted to facilitate illustration of the structure;

FIGURE 10 is a cross-sectional view, taken along the line 10—10 of FIGURE 11; and

FIGURE 11 is a cross-sectional view, taken along the line 11—11 of FIGURE 10.

In the drawings, a plurality of support brackets **11** are mounted in pilasters **12** secured in upright position to the front of a wall or partition **13**. Each support bracket comprises a flat metal strip having two vertically aligned hook-shaped members **14** at one end thereof adapted to extend into vertically spaced slots **15** in the front wall of each pilaster to detachably secure the support bracket to the pilaster. The support brackets are of uniform size, and their outer ends are in transverse alignment when they are secured to the pilasters. The structure described above is identical in each embodiment of the invention, and the description thereof will not be repeated.

Referring to FIGURES 1, 3, 5 and 6, the adapter **16**, preferably of cast aluminum, comprises a base member **17** and a support member **18** integral therewith. The support member extends upwardly in a transverse direction at the outer end of the base member. The base member is secured to the bracket support by screws **19** or any other suitable fastening means.

The support member **18** comprises an upstanding wall **20** of sufficient height to insure that a hang rod mounted thereon will be properly positioned. The upper surface of the hang rod must be spaced above base member **17** far enough so that a garment hanger may be slid across the hang rod without interference from any part of the adapter or support bracket. The upper edge of wall **20** has a diameter greater than the thickness of the body portion of the wall and is preferably shaped to form a bead **21**. The peripheral surface of bead **21** constitutes a support surface adapted to engage an interior portion of a tubular hang rod **22**, as hereinafter described.

Hang rod **22** may be extruded in substantially cylindrical shape and then deformed to provide the desired interior shape, but preferably is formed from strip material. The center portion of the strip is rolled to form an outer portion **23** of substantially cylindrical shape, and the longitudinal edge portions are reversely bent inwardly of the tubular outer portion to form an interior portion **24** connected to outer portion **23** by walls **25**. Walls **25** are spaced from each other a distance substantially equal to the thickness of wall **20** of support member **18**. Interior portion **24** is shaped to conform to the cross-sectional configuration of bead **21**.

Hang rod **22** may be mounted on support member **18** by sliding the hang rod longitudinally of the support member from one end thereof, or may be pushed down over the upper edge of the support member and snapped into place. The hang rod is supported by the engagement of its interior portion **24** with bead **21** from which the hang rod is suspended. Walls **25** of hang rod **22** engage opposite surfaces of upstanding wall **20** to stabilize the support of the hang rod.

When a plurality of hang rods are mounted on adapters in end to end relationship, splice bars **26** or **27** may be inserted within adjacent hang rods at the joints, if the joints are spaced from adapters **16**. Splice bar **26**, shown in FIGURE 5, is shaped to conform to the shape of support member **18** and has a bead **28** adapted to fit within interior portion **24** of hang rod **22**. A flat plate portion **29** depending from bead **28** fits between walls **25** of the hang rod. Splice bar **27**, shown in FIGURE 6, comprises

a cylindrical rod adapted to fit within interior portion **24**. Either of these splice bars will reinforce the joint between adjacent hang rods having abutting ends to provide a rigid hang rod construction.

In the embodiment of FIGURE 4, the adapter **30** comprises a base member **31** and a support member **32**. Base member **31** is essentially a duplicate of base member **17** and is secured to the support bracket in the same manner. Support member **32** extends upwardly in a transverse direction from the outer end of base member **31**. The upper edge **33** of support member **32** constitutes a support surface adapted to engage an interior portion **34** of a tubular hang rod **35**.

Hang rod **35** is preferably formed from strip material. The central portion of the strip is rolled into tubular shape, and the longitudinal edge portions of the strip are reversely bent inwardly of the tubular portion to provide walls **36** engageable with opposite surfaces of support member **32** to stabilize the support of the hang rod which is suspended from the upper edge of the support member. Walls **36** terminate in coplanar flanges **37** the inner ends of which extend into notches **38** on opposite sides of support member **32**. The engagement of the inner ends of flanges **37** with notches **38** prevents accidental displacement of the hang rod in any direction transversely of the notches.

In an installation comprising a plurality of hang rods in end to end relationship, a splice bar **39** may be inserted in the ends of adjacent hang rods to reinforce the joint between said hang rods when the joint is spaced from the adapters. Splice bar **39** is a segment of a cylinder, and fits between flanges **37** and the portion of the hang rod diametrically opposite the side from which walls **36** are reversely bent.

In the embodiment of FIGURES 9 to 11, the adapter **40** comprises a base member **41** and a support member **42**. The base member is secured to support bracket **11** in the same manner as base members **17** and **31**. Support member **42** extends upwardly in a transverse direction at the outer end of base member **41**. The upper edge of support member **42** comprises a support surface **43**, and two positioning pins **44** extend upwardly from said support surface.

Hang rod **45** is shown as having an outer configuration different from the outer configuration of hang rods **22** and **35**, but it will be understood that any hang rod may have any desired tubular outer configuration. Hang rod **45** may be extruded, but is preferably fabricated as a welded tube, and is then deformed to attain the desired configuration. A portion of the tubular member is reversely bent to form an interior wall **46** spaced from the outer perimeter of the tubular member by walls **47**. Wall **46** is provided with a series of apertures **48** spaced uniformly throughout its length. Apertures **48** each have a diameter slightly greater than the diameter of pins **44**.

When one of the apertures **48** is aligned vertically with a pin **44**, hang rod **45** is dropped over the pin to position the hang rod on the support member, and the hang rod is supported in suspension by the engagement of wall **46** with support surface **43**. Pins **44** and apertures **48** are so spaced that when the aperture closest to one end of hang rod **45** has one pin of an adapter extending through it, and the aperture closest to the end of another hang rod is positioned around the other pin of said adapter, the ends of the two hang rods abut each other. Pins **44** prevent lateral displacement of the hang rod.

Although I have described three 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. In a hang rod assembly, a bracket, an adapter mounted on said bracket, said adapter comprising a body portion and a support member extending upwardly and integral with said body portion, and a tubular hang rod suspended from the upper edge of said support member and supported solely by said support member, said hang rod having interior portions thereof in engagement with opposite surfaces of said support member, and the entire exterior portion of said hang rod being free of engagement with said support member.

2. In a hang rod assembly, a bracket, an adapter mounted on said bracket, said adapter comprising a body portion and a support member extending upwardly and integral with said body portion, and a tubular hang rod suspended from the top of said support member and supported solely by said support member, said hang rod having interior terminal edges in engagement with a portion of said support member of reduced thickness below the top of said support member to hold said hang rod against accidental displacement from said support member, and the entire exterior portion of said hang rod being free of engagement with said support member.

3. In a hang rod assembly, an adapter and a tubular hang rod, said adapter comprising a body portion and a support member integral with said body portion, said support member extending upwardly and transversely of said body portion, said support member engaging an interior portion of said hang rod to support said hang rod in suspended position, the exterior portion of said hang rod being free of engagement with said support member and the interior portion of said hang rod having longitudinally extending walls engaging said support member to stabilize the support of said hang rod.

4. In a hang rod assembly, an adapter and a tubular hang rod, said adapter comprising a body portion and a support member integral with said body portion, said support member extending upwardly and transversely of said body portion, said support member engaging an interior portion of said hang rod to support said hang rod in suspended position, said hang rod having two longitudinally extending walls within its tubular portion, said walls engaging opposite surfaces of said support member in two separate areas to stabilize the support of said hang rod.

5. In a hang rod assembly, an adapter and a tubular hang rod, said adapter comprising a body portion and a support member integral with said body portion, said support member extending upwardly from one end of said body portion in a transverse direction, said support member having a length greater than the thickness of said body portion and engaging an interior portion of said hang rod to support said hang rod in suspended position, the interior portion of said tubular hang rod being so shaped as to engage each side of said support member along two vertically spaced lines to stabilize the support of said hang rod.

6. In a hang rod assembly, a bracket, an adapter mounted on said bracket, said adapter comprising a body portion and a support member extending upwardly and integral with said body portion, said support member having a support surface along its upper edge, a plurality of pins extending upwardly from said support surface, and a tubular hang rod having an interior portion thereof suspended from said support surface, said interior portion having a plurality of apertures through which said pins extend.

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