July 8, 1969 F. F. SALZMANN 3,453,682

DRAPERY ROD FIXTURE WITH CARRIER GATE

Filed Oct. 24, 1967

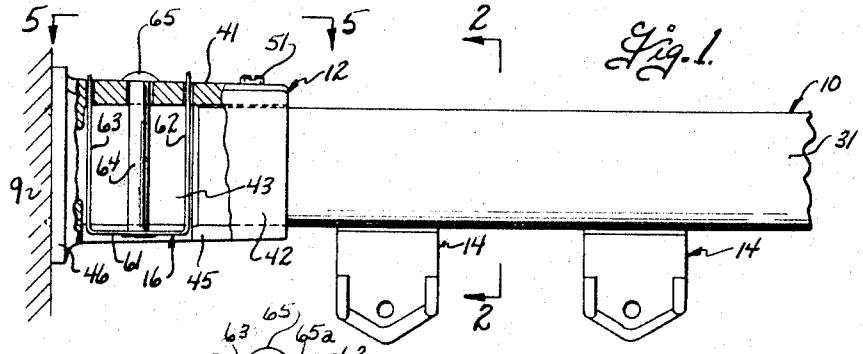


Fig. 1.

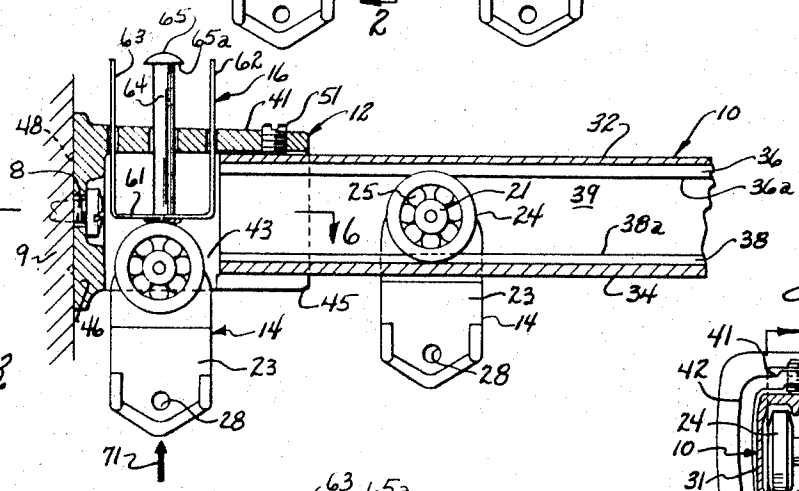


Fig. 3.

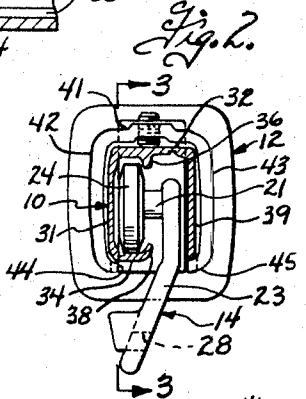


Fig. 2.

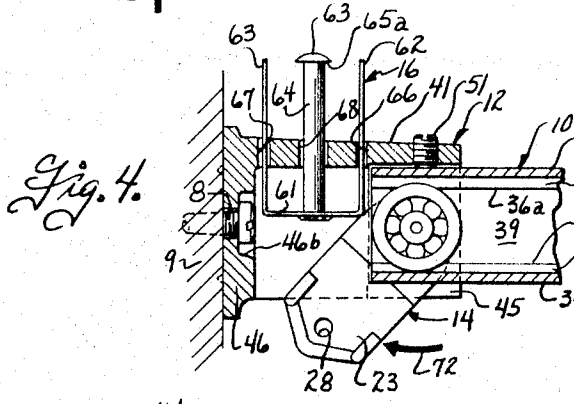


Fig. 4.

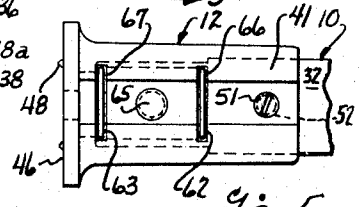


Fig. 5.

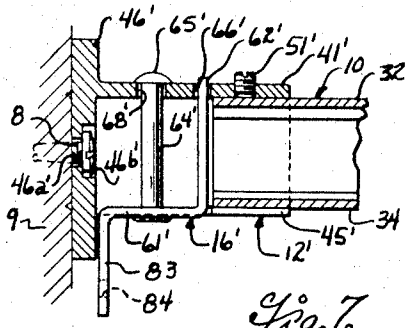


Fig. 7.

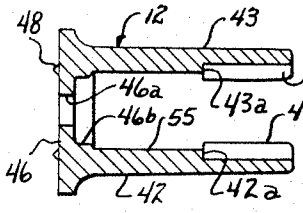


Fig. 6.

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DRAPERY ROD FIXTURE WITH CARRIER GATE

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U.S. Cl. 16—87.4 12 Claims

ABSTRACT OF THE DISCLOSURE

A drapery rod and a plurality of carriers supported on the rod. An end fixture mounted on a wall and supporting an end of the rod. A carrier gate carried by the fixture and vertically slidable between an upper position for insertion and removal of the carriers from the rod, and a gravity-urged lower position blocking the end of the rod.

Background

This invention pertains generally to drapery supports including drapery rods and fixtures therefor.

In the prior art, carriers have been inserted into trackways through rearwardly facing openings and the opening provided with a gate arranged for lateral movement to permit insertion or removal of carriers. Such an arrangement is shown in Patent No. 3,333,622. Other arrangements have included downwardly facing openings with removably mounted gates which are held in position by a spring or screw. These require complete removal of the gate for insertion or removal of the carriers; sometimes requiring use of a tool, and endangering loss of the gate.

Summary

The present invention relates generally to improvements in supports for draperies and the like, and more particularly to such a support including a drapery rod with an improved carrier gate mounted, for example, on a drapery rod fixture.

For convenience, the improved support of the present invention may be referred to as a drapery support; however, this is done by way of illustration, and it should be understood that the term "drapery" includes curtains, tapestries, or other similar flexible hangings.

It is a general object of this invention to provide a drapery support having a carrier gate that is gravity-urged to closed position.

Still another object of this invention is to provide a drapery support with a carrier gate that is easily opened by movement of a carrier upwardly against the gate.

Another object is to provide a drapery support with a carrier gate which is substantially concealed in the closed position.

Yet another object of this invention is to provide a drapery support including a fixture for mounting on a supporting surface, which fixture is adapted for supporting either end of a rod.

Still another object is to provide a drapery support including a fixture for supporting an end of the rod and having a carrier gate for blocking the end of the rod.

These, and other objects and advantages of the present invention, will become apparent as the same becomes better understood from the following detailed description when taken in conjunction with the accompanying drawings.

Drawing

FIGURE 1 is a full-scale front elevational view of an embodiment of the present invention with a portion broken away for better illustration of the parts;

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

FIGS. 3 and 4 are longitudinal sectional views taken generally along line 3—3 of FIG. 2 and illustrating the carrier gate in a moved position;

FIG. 5 is a top view taken along line 5—5 of FIG. 1;

FIG. 6 is a horizontal sectional view of the fixture taken along line 6—6 of FIG. 3; and

FIG. 7 is a longitudinal sectional view of another embodiment of the invention.

Description

Reference is now made more particularly to the drawings which illustrate the best presently known mode of carrying out the invention and wherein similar reference characters indicate the same parts throughout the several views.

The embodiment illustrated in FIGS. 1–6 includes an elongate drapery rod, generally designated **10**, and an end fixture, generally designated **12**, supporting one end of the rod. A plurality of carriers, generally designated **14**, are carried by the rod. A carrier gate, generally designated **16**, is slidably mounted on the fixture **12** for movement between an upper position permitting insertion and removal of the carriers **14** and a lower position (see FIG. 1) for blocking the end of the rod and retaining the carriers thereon.

The carriers are herein illustrated as a roller-type; however, it is contemplated that carriers of the type known as "slides" may be utilized in the present invention. The carriers illustrated are of the same construction as those illustrated and described in detail in Patent No. 3,345,676, issued to Joseph V. Graber and Ferdinand F. Salzmann, and reference is made thereto for a more complete description. In general, the carrier **14** includes a head portion and a body portion. The body portion includes an axle or shaft **21** and a depending member **23** attached adjacent the rear end of the axle. The head portion is in the form of a wheel **24** rotatably mounted adjacent the front of the axle as by a plurality of ball bearings **25**. The depending member **23** has an opening **28** for attachment to a drapery as by a hook or other convenient means.

Elongate rod **10** includes a generally upright front wall **31**, a top wall **32**, and a bottom wall **34**. A rear wall extends between the top and bottom walls and includes a top portion **36** attached to the top wall **32** and a bottom portion **38** attached to the bottom wall **34**. Portions **36** and **38** have their adjacent edges **36***a* and **38***a* spaced from each other to define a rearwardly opening slot which extends generally the full length of the rod. As best seen in FIG. 2, top wall **32** extends rearwardly of portion **36**, and a second rear wall **39** depends from the rear edge thereof to a level adjacent the bottom of bottom wall **34**. It can be seen that rear wall **39** generally blocks the view of the rearwardly opening slot from the back side and thereby provides an attractive rod from both the front and back sides.

Front wall **31**, top wall **32**, bottom wall **34**, and rear wall portions **36** and **38** define a passageway in which the head of the carriers may be disposed. The aforementioned slot between edges **36***a* and **38***a* provides access to the passageway. The relative size of the head of each carrier and that of the slot is slected to that the head portion is normally retained in the passageway. In the embodiment illustrated, wheel **24** is supported on the upper surface of bottom wall **34** and is adapted to roll therealong. Wheel **24** has a diameter of sufficient size so that its upper portion is disposed above the lower surface of edge **36***a* as best seen in FIGS. 2–4. As can be seen in the drawing, the body portion of the carrier extends through the slot and conveniently depends to a point below the rod.

The fixture **12** has a top wall **41** with a front wall **42** and a rear wall **43** depending therefrom, as best seen in FIG. 2. At the bottom of the fixture are bottom wall portions **44** and **45** attached to the walls **42** and **43**, respectively. The portions **44** and **45** are spaced apart for a purpose which will hereinafter become apparent. The fixture has an end wall **46** which conveniently has a generally flat surface for engaging a mounting surface such as wall **9**. End wall **46** is provided with an opening **46***a* for passage of a fastener **8** to secure the fixteure to wall **9**. End wall **46** is also formed with a recess as at **46***b* to accommodate the head of fastener **8** so that the carrier gate **16** may pass thereby. A plurality of projections **48** are provided on the outer surface of end wall **46** for engaging wall **9** when the fastener **8** is tightened to retain the fixture in place. The aforementioned walls **41–46** define a cavity into which the rod **10** may be inserted through the open end of the fixture. As best seen in FIG. 6, front wall **42** and rear wall **43** are provided with internal shoulders **42***a*, **43***a*, respectively, for engaging the end of the rod **10** to limit the insertion thereof at a point slightly spaced from the carrier gate **16**. Bottom wall portions **44** and **45** respectively underlie the bottom wall **34** and the lower end of the back wall **39** of the rod **10**. A fastener **51** extends through a threaded opening **52** in the top wall **41** to engage the top wall **32** of rod **10** and hold the rod in place. The fixture **12** is preferably symmetrical about a vertical longitudinal plane so that the fixture can receive the opposite end of rod **10**, if desired. In practice, a fixture **12** may be utilized at both ends of the rod.

With the rod **10** held in place on the fixture **12**, the aforementioned passageway communicates with the cavity defined by the walls **41–46** of the fixture. As best seen in FIG. 6, bottom wall portions **44** and **45** terminates adjacent the shoulders **42***a* and **43***a*, thereby defining an opening **55** at the bottom of the fixture. In general, opening **55** has a size sufficient for insertion of the head of the carrier into the cavity and thence into the passageway. For this purpose, the opening **55** has a length and width larger than the head portion **24**. When inserted into the passageway, the body portion extends through the slot and depends below the rod, as described above. The bottom wall portions **44** and **45** are spaced apart to accommodate the passage of the body portion from the slot **52** into the passageway of the rod **10**.

As stated above, carrier gate **16** is slidably mounted on fixture **12** for movement between an upper position to enable insertion and removal of the carriers **14** through the bottom opening **55** and a gravity-urged lower position to prevent removal of the carriers. In the embodiment illustrated in FIGS. 1–6, the carrier gate generally U-shaped construction, including a bottom leg **61**, a first upright leg **62** adjacent the end of the rod, and a second upright leg **63**. Legs **62** and **63** preferably lie in parallel planes extending crosswise of rod **10**. Intermediate the legs **62** and **63** is a generally cylindrical upright leg **64** which, in the embodiment shown, is a rivet attached to bottom leg **61**. As shown, leg or rivet **61** is preferably parallel to legs **62** and **63**. The top wall **41** of the fixture has an opening for the passage of each of the legs **62–64**. As shown, top wall **41** has elongate openings in the form of crosswise slots **66** and **67** to accommodate legs **62** and **63**, respectively, and a circular opening **68** to accommodate rivet **64**. The openings **66–68** preferably provide clearance around the legs so the legs easily slide therethrough. Leg **64** is provided with a head **65** defining a shoulder **65***a* for engaging the upper surface of top wall **41** and positioning the carrier gate at the closed or lower position shown in FIG. 1. As best seen in FIG. 5, leg **62** extends generally crosswise of the cavity at the end of the rod and thereby completely blocks the pasageway when the carrier gate is in the lower position. Legs **61** and **63** are conveniently of the same width as leg **62**, and leg **61** presents a generally flat surface disposed in the opening **55** and substantially filling the same when the slide gate is in its lower position. Leg **61** may be engaged by a carrier **14**, and the entire slide gate moved upwardly, as shown in FIG. 3, when the carrier **14** is moved in the direction of arrow **71**. Since the legs **62–64** are slidably mounted in the openings in the top wall, the carrier gate easily slides to an upper position when pushed by the carrier **14**, thereby allowing easy insertion of the carriers into the passageway. When the carrier is moved to a position in the passageway, the slide gate is returned to its lower position by means of gravity. The slide gate **16** may also be forced to its upper position by swinging the carrier **14** in a direction indicated by arrow **72** in FIG. 4 and causing the body portion **23** to engage the slide gate **16** at the juncture of legs **61** and **62**. This provides a convenient method of removing the carriers from the passageway.

Another embodiment is illustrated in FIG. 7. The rod **10** is the same as illustrated in FIGS. 1–6. The fixture and carrier gate are slightly modified, and similar parts are indicated by the same numeral followed by the postscript prime (′). As shown, fixture **12′** is generally of the same configuration as fixture **12** except that it has only openings **66′** and **68′** in the top wall **41′**. Carrier gate **16′** is a generally Z-shaped construction, including a bottom leg **61′** and an upright leg **62′** adjacent the end of the rod **10**. A second leg **83** lies in a plane parallel to leg **62′**, but depends from the opposite end of bottom leg **61′**. In this manner, no opening is required to accommodate leg **83**. Rivet **64′** is preferably midway between legs **62′** and **83** so that it is about at the center of gravity of the carrier gate **16′**. Second leg **83** has an opening **84** adjacent the lower end thereof for attachment to a drapery in any convenient manner. In this manner, the weight of the drapery further anchors the carrier gate **16′** in its lower position, and the carrier gate provides an end anchor for the drapery.

It is now deemed obvious that the present invention provides a drapery support which includes a drapery rod, a plurality of carriers mounted on the rod, and a slide gate operable for insertion or removal of the carriers in one position and for blocking removal of the carriers in another position. The carrier gate is urged to its blocking position by force of gravity and may be mounted on a fixture which supports the end of the rod and properly positions the rod with respect to the carrier gate. The fixture may also be utilized for mounting on a supporting surface, if desired.

What is claimed is:

1. In a drapery support including an elongate rod having lengthwise extending wall portions defining a passageway and with adjacent edges spaced apart to define a slot providing access to said passageway, a plurality of carriers supported on the rod and each including a head portion in the passageway and a body portion extending through the slot, each carrier so constructed and arranged that the head portion is normally retained in the passageway, and each body portion having means outside the rod for attaching a drapery thereto, the improvement comprising:

a fixture having a top and bottom and mounted on the rod at one end thereof, said fixture having means defining a cavity communicating with said passageway and an opening in the bottom, the bottom opening having a length and width larger than the head portion and a size sufficient for insertion of the head portion into the passageway and with the body portion extending through the slot, said fixture having at least one opening in the top; and

a carrier gate slidably mounted on the fixture for movement between an upper position to enable insertion and removal of carriers through the bottom opening and a gravity-urged lower position to prevent removal of the carriers, the carrier gate having means defining a surface disposed in the bottom opening for engagement by a carrier to move the carrier gate to said upper position, the carrier gate also including

a portion extending through said top opening and having means thereon for engaging the top of the fixture to position the carrier gate at the lower position, and said portion being shaped for movement through the top opening when the carrier gate is moved to its upper position.

2. The combination of claim 1 wherein the fixture has a second opening in the top; and wherein the carrier gate has means defining a surface at said one end of the rod for blocking at least a portion of the passageway when the carrier gate is in said lower position to retain the carriers in the passageway, said last-mentioned means being movable through the second top opening as the carrier gate is moved to its upper position.

3. The combination of claim 2 wherein means defining a surface in the bottom opening has a first end adjacent said one end of the rod and a second end longitudinally spaced therefrom; wherein the last-mentioned means comprises a flat leg attached at said first end and lying in an upright plane crosswise of the rod; and including a second flat leg attached at the second end and lying in a plane generally parallel to the plane of the first leg.

4. The combination of claim 3 wherein the second leg extends downwardly from said second end to a depending end below the rod; said second leg having means adjacent said depending end for attaching a drapery thereto and thereby anchoring the slide gate in the lower position.

5. The combination of claim 3 wherein the second leg extends upwardly from said second end, the fixture has a third opening in the top thereof and having a size sufficient for passage of the second leg therethrough when the carrier gate is moved to the upper position, and the portion extending through the top opening is located intermediate the first and second legs at about the center of gravity of the carrier gate.

6. In a drapery support including an elongate rod having lengthwise extending wall portions defining a passageway and with adjacent edges spaced apart to define a slot providing access to said passageway, a plurality of carriers supported on the rod and each including a head portion in the passageway and a body portion extending through the slot, each carrier so constructed and arranged that the head portion is normally retained in the passageway, and each body portion having means outside the rod for attaching a drapery thereto, the improvement comprising:

a fixture having a top and bottom and mounted on the rod at one end thereof, said fixture having means defining a cavity communicating with said passageway and an opening in the bottom, the bottom opening having a size sufficient for insertion of the head portion into the passageway and with the body portion extending through the slot, said fixture having at least one opening in the top; and

a carrier gate slidably mounted on the fixture for movement between an upper position to enable insertion and removal of carriers through the downwardly facing opening and a gravity-urged lower position to prevent removal of the carriers, the carrier gate having a first leg in the bottom opening in the lower position for engagement by a carrier to move the carrier gate to the upper position as the carrier is moved into said cavity, the carrier gate also including a second leg attached to the first leg and at an angle thereto, the second leg blocking at least a portion of the passageway at the end of the rod when the carrier gate is in the lower position to retain the head portions in the passageway, the second leg being generally upright and having at least a portion disposed in said top opening, and means on the carrier gate defining a surface for engaging the fixture in the lower position to hold the carrier gate at the lower position.

7. The combination of claim 6 wherein the fixture includes an end cap logitudinally spaced from said one end of the rod and having a generally flat surface for engaging an upright mounting surface, the end cap having an opening therein communicating with the cavity for passage of a fastener to secure the fixture to said mounting surface.

8. The combination of claim 6 wherein the wall portions of the rod include top, bottom, and front walls; a rear wall having top and bottom portions attached to the top and bottom walls, respectively, and spaced apart to define said slot; said top wall extending rearwardly of the top portion; and a second rear wall depending from adjacent the rear of the top wall to a level approximating the level of the bottom wall and spaced rearwardly therefrom; and wherein the fixture has front and rear walls attached to the top and bottom and therewith defining said cavity; the fixture being shaped for longitudinal insertion of the one end of the rod into a portion of the cavity; internal shoulder means on the inside of each of said front and rear walls of the fixture to engage the one end of the rod and limit the insertion thereof; and said fixture being symmetrical about a vertical longitudinal plane for selective insertion of the opposite end of the rod.

9. A drapery support including means defining longitudinally extending top, bottom, and front walls; a rear wall having top and bottom portions attached to the top and bottom walls, respectively, and spaced apart to define a rearwardly opening slot; a plurality of carriers supported on one of said walls and each including a head portion disposed in the area surrounded by the walls and normally retained therein; each carrier also including a body portion extending through the slot and having means outside the slot for attaching a drapery thereto; the bottom wall having a downwardly facing opening therein having a length and width larger than the head portion for insertion of the head portion into said area; at least the bottom portion of the rear wall terminating adjacent the downwardly facing opening to permit the body portion to move to a position extending through the slot when the head portion is inserted; the top wall having at least one upwardly facing opening therethrough directly above the downwardly facing opening; and a carrier gate including: upright leg means slidably mounted in the upwardly facing opening for movement between an upper position to enable insertion and removal of carriers and a gravity-urged lower position to prevent removal of carriers, a generally horizontal leg attached to the upright leg means and disposed crosswise of said downwardly facing opening when the leg means are in lower position, said generally horizontal leg being engageable by a carrier to move the leg upwardly and the leg means to said upper position, and means on the leg means for engaging the top wall when the leg means are in the lower position to hold the same thereat.

10. A drapery support as set forth in claim 9 wherein the top wall has a second upwardly facing opeing spaced from said one upwardly facing opening; and wherein the upright leg means includes one upright leg passing through said one upwardly facing opening and having a head thereon for engaging the top of the fixture; and the upright leg means also includes a second upright leg passing through said second upwardly facing opening and blocking the passageway when the carrier gate is in the lower position.

11. A drapery support including means defining longitudinally extending top, bottom, and front walls; a rear wall having top and bottom portions attached to the top and bottom walls, respectively, and spaced apart to define a rearwardly opening slot; a plurality of carriers supported on one of said walls for movement therealong and each including a head portion disposed in the area surrounded by the walls and normally retained therein;

each carrier also including a body portion having a first part attached to the head portion and extending rearwardly therefrom through the slot and a second part depending from the first part to a point spaced below the bottom wall; said second part movable in a path spaced from the walls as the carrier is moved; the bottom wall having a downwardly facing opening therein having a length and width larger than the head portion for insertion of the head portion into said area; at least the bottom portion of the rear wall terminating adjacent the downwardly facing opening to permit the body portion to move to a position extending through the slot when the head portion is inserted; a carrier gate movable vertically between an upper position to enable insertion and removal of carriers and a lower position to prevent removal of carriers; means for stopping the vertical movement of the carrier gate at said lower position; means for guiding the carrier gate during movement between said positions; the carrier gate including a generally horizontal leg disposed in said downwardly facing opening when the carrier gate is in said lower position and extending rearwardly into said path of movement of the second part of the body portion; and said carriers being pivotal about a lateral axis for engaging the second part of the body portion against the carrier gate as the carrier is pivoted to move the carrier gate upwardly to the upper position.

12. A drapery support as set forth in claim 11 wherein the second part of the body portion of the carriers is as wide as the head portion.

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DONALD A. GRIFFIN, *Primary Examiner.*