TRAVERSE ASSEMBLY FOR DRAPERIES AND THE LIKE

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ABSTRACT

A traverse assembly for draperies and the like including an elongated rigid rod having a top wall and front and intermediate walls extending downwardly from the top wall defining a downwardly opening front carrier track, and a rear wall extending downwardly from the front wall and having a bottom wall portion at its lower edge defining a forwardly opening rear cord track spaced rearwardly from the front carrier track to provide a downwardly opening access passage therebetween. Headed drapery carriers are supported in the front carrier track and extend downwardly below the track to support drapery panels adjacent the front of the rod and traverse cords are disposed in the rear cord track and connected to a master carrier that is guidably supported at the forward edge of the bottom wall portion of the rear cord track and extends forwardly across the access passageway and below the intermediate wall of the front carrier track.

10 Claims, 6 Drawing Figures
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BACKGROUND OF THE INVENTION

In drapery traverse rods, it is generally regarded as desirable to separate the traverse cords from the drapery carriers in order to prevent interference between the cords and carriers during movement along the rod and various different traverse rod arrangements have been proposed to effect separation of the cords and carriers. In some prior traverse rods, the rods have been formed with a central carrier track and dual cord tracks at the front and rear of the rod along opposite sides of the carrier track such that the drapery carrier supported the drapery heading at a location approximately medially between the front and rear edges of the rod. However, in many drapery installations it is desirable to support the drapery heading along the forward edge of the rod and other prior traverse rods have utilized a front carrier track and a rear cord track. In general, the prior rods having a front carrier track and a rear cord track formed the rear cord track with either a downwardly opening channel or a rearwardly opening channel. Traverse rods having a downwardly opening cord channel were in part objectionable in that they did not adequately underlie and support the traverse cords along the length of the rod. Those with rearwardly opening cord channels not only exposed the cord channels to view at the rear side of the rod but also aggravated the problem of operatively connecting the traverse cords to the master drapery carrier. In addition, traverse rods with rearwardly opening cord channels could not be satisfactorily utilized in recessed rod mountings.

SUMMARY OF THE INVENTION

The present invention relates to an improved traverse assembly for draperies and the like in which the rod has front and intermediate walls defining a downwardly opening front carrier channel along the front of the rod and the rod also has a downwardly extending rear wall formed with a forwardly extending bottom wall portion defining a forwardly opening rear cord channel along the rear edge of the rod, with the rear cord channel spaced rearwardly from the front carrier channel to provide an access passageway therebetween for receiving a master carrier that is guidably supported on the forward edge of the rear cord channel and extends across the access passageway and below the intermediate wall and into the forward carrier channel for connection to a drapery carrier. The front carrier channel is advantageously made somewhat shallower than the rear cord channel so that the master slide extends forwardly from the rear cord channel in underlying relation to the intermediate wall. The rod can be formed in separate rod sections and connected by an internal splice disposed in the area between the intermediate wall and the rear wall of the rod so as to not interfere with the drapery carriers, and separate pulley housings can be provided at the ends of the rods and connected to the rod by a splice section that is also located in the area between the intermediate wall and the rear wall of the rod so as to avoid interference with the drapery carriers.

Various objects of this invention are to provide a traverse assembly for draperies and the like in which the drapery carriers and cords are supported in separate channels; in which the cord channel underlies and supports the traverse cords along the length of the rod; in which the cord channel opens forwardly so as to avoid exposure of the cords at the rear of the rod; and in which the rear cord channel is spaced rearwardly from the front carrier channel to provide an access passageway to receive the master carrier and to also facilitate connection of the traverse cords to the master slide.

Other objects of this invention are to provide a traverse assembly in which the carriers can move along the front carrier channel past the cord guide pulleys at the rear cord channel for substantially full opening of the draperies; in which the master carrier receives one of the drapery carriers to effect movement of the latter and in such a manner as to substantially minimize any dead space between adjacent carriers when the draperies are open and when they are closed.

These, together with other objects and advantages of this invention will be more readily understood by reference to the following detailed description when taken in connection with the accompanying drawings wherein:

FIG. 1 is a fragmentary perspective view of a drapery installation utilizing the drapery traverse assembly of the present invention;

FIG. 2 is a fragmentary bottom view of the drapery traverse assembly of FIG. 1;

FIG. 3 is a transverse sectional view taken on the plane 3—3 of FIG. 1 showing the parts on an enlarged scale;

FIG. 4 is a transverse sectional view taken on the plane 4—4 of FIG. 2 and showing the pulley housing on an enlarged scale;

FIG. 5 is a transverse sectional view through the rod taken on the plane 5—5 of FIG. 2 and showing the rod and master slide on an enlarged scale; and

FIG. 6 is a fragmentary perspective view illustrating the carriers and the manner of attachment of the drapery heading thereto.

The traverse assembly of the present invention is generally adapted for supporting draperies, curtains and the like, hereinafter generally referred to as draperies. For convenience in description, the term "front" is used to designate the side of the rod from which the draperies are suspended and which is the side normally exposed to view. Thus, in window installations, the front side of the rod will generally be the side facing inwardly toward the room while the rear side of the rod faces toward the wall or window. However, the rod of the present invention presents a neat appearance when viewed from either side and the rod can be mounted so that the front side faces the window, if desired.

Referring more specifically to the accompanying drawings, the drapery traverse assembly includes an elongated rod 10 conveniently formed by extrusion and which has a generally flat top wall 11, a front wall 12 which extends downwardly from the top wall adjacent its forward edge, and an intermediate wall 13 extending downwardly from the top wall intermediate the forward and rear edges of the latter. The depending front and rear walls 12 and 13 define a downwardly opening carrier channel 14 and the front wall has a rearwardly extending flange 12a at its lower edge and the inter-
mediate wall has a forwardly extending flange 13a at its lower edge which is spaced from the flange 12a and is substantially coplanar therewith to define spaced carrier guide rails at the lower end of the front carrier channel or track. The rod 10 also includes a rear wall 15 extending downwardly from the top wall 11 adjacent the rear edge of the latter and a forwardly extending bottom wall portion 16 on the lower edge of the rear wall to define a forwardly facing cord channel 17 along the rear of the rod. The bottom wall is adapted to underlie and support the traverse cords along the length of the rod and the bottom wall is formed with an upwardly extending flange 16a at its forward edge to aid in retaining the traverse cords in the rear cord channel. The flange 16a at the forward edge of the bottom wall is spaced rearwardly a substantial distance from the intermediate wall 13 sufficient to provide a downwardly opening front access passageway 18 in the rod between the rear cord channel and the front carrier channel. For reasons pointed out more fully hereinafter, the underside of the flanges 12a and 13a on the front carrier channel are preferably disposed at a level above the bottom wall 16 on the rear cord channel. In addition, the intermediate wall 13 is also preferably provided with a rearwardly extending flange 13b along its lower edge, for a purpose which will become apparent from the following description.

It is contemplated that the rod 10 can be mounted by brackets on a wall, or flush with a ceiling or recessed in a ceiling if desired. In order to adapt the rod for mounting by a bracket on a wall, the rod is formed with projections 21a and 21b at the forward and rear edges of the top wall to engage a rearwardly opening hook 22a and a forwardly projecting locking tab 22b on a rod mounting bracket 22 having a mounting flange 22c adapted for attachment to a wall. Brackets of this type are generally well known and further description is deemed unnecessary. In order to provide the aforementioned projections 21a and 21b at the top wall, without increasing the overall width of the rod, the front and rear walls 12 and 15 are formed with upwardly and inwardly inclined portions adjacent their upper ends, as best shown in FIGS. 4 and 5. Holes 24 can be preformed or drilled in the top wall of the rod at the time of installation, for mounting the rod in either flush or recessed ceiling installations. For this purpose, a groove 24a (FIGS. 3 and 5) is formed in the underside of the top wall to facilitate drilling of holes in the top wall.

A multiplicity of drapery carriers 25 are mounted in the front carrier track, only a few of the drapery carriers being shown in the drawings to simplify illustration. The drapery carriers 25 are of the type having a head 25a dimensioned to be received in the front carrier channel 14 and to rest on and be guidably supported by the carrier guide rails formed by flanges 12a and 13a. The carriers also include a pendant portion 25b which is adapted to extend downwardly between the flanges 12a, 13a to a level below the front carrier channel, and which pendant portion has a means for attaching a drapery thereto. In the specific form herein shown, the drapery carriers are of a known type formed with a hook portion 25c (See FIG. 6) which is arranged to engage a loop 26a on a drapery panel supporting member 26. The drapery panel supporting members are formed of plastic or the like and are attached to the heading of a drapery 27 as by stitching indicated at 26b. Such drapery supports are commonly utilized to support draperies to form a generally Z-shaped pleat as best shown in FIG. 1 and, during opening and closing of the drapery panels, the loop portion 26a of the drapery support turns or swivels about the hook 25c on the drapery carrier as the drapery support moves between a position extending crosswise of the rod, when the drapery is opened, and a position extending at an angle of less than 90° to the rod, when the drapery is closed. The width of the loop 26a on the drapery support is made sufficiently wide with relation to the hook 25c on the drapery carrier to accommodate the above-described swiveling movement. In order to inhibit turning of the carriers relative to the track, the heads 25a on the carriers are herein shown formed with a generally rectangular configuration. The drapery carriers 25 are advantageously interconnected by a flexible connector 28, conveniently in the form of a cord which is non-slidably connected to the drapery carrier to interconnect the drapery carriers and control the maximum spacing between adjacent drapery carriers when the drapery is closed. The drapery carriers can conveniently be formed of a plastic material having desirable wear resistance and low friction characteristics, and the carriers can be molded on the cord 28 at selected locations along the cord. As best shown in FIG. 5, the pendant portions 25b of the drapery carriers 25 are formed with outwardly projecting ears 25d which are normally spaced slightly below the flanges on the front carrier channel and which are adapted to limit upward movement of the carriers in the channel to prevent dislodgement of the same.

Drapery traverse cords 31 are disposed in the rear cord channel 17 and traverse cord guide means, advantageously in the form of pulleys 32a and 32b, are provided adjacent the ends of the rear cord channel to guide the traverse cords into and out of the rear cord channel. The cord guide pulleys 32a and 32b are mounted on a pulley housing 33 formed separate from the rod and connected thereto at each end. The pulley housings 33 are conveniently formed of plastic and include a top wall 34 adapted to align with the top wall of the rod and front and intermediate walls 35 and 36 adapted to respectively align with the front and intermediate walls of the rod to define a downwardly opening front channel 37 that constitutes a continuation of the front carrier channel 14 of the rod. The front and intermediate walls 35 and 36 of the pulley housing are also formed with opposed flanges 35a and 36a which are adapted to underlie and support the heads of the drapery carriers. As shown in FIG. 2, one of the drapery carriers 25 is mounted adjacent the end of the front channel 37 in the pulley housing and is retained in position by a slide lock 38, herein shown in the form of a thumb screw 38a and nut 38b. The pulley housing also includes a rear wall 41 aligned with the rear wall 15 of the rod and a second intermediate wall 43 spaced forwardly from the rear wall. The pulleys 32a and 32b are disposed between the rear wall 43 and the second intermediate wall 42 and are rotatably supported as by shafts 43. As best shown in FIG. 4, the pulleys 32a and 32b are vertically and horizontally offset from each other so as to separate the vertical runs 31a, 31b of the
traverse cord and also separate the horizontal runs 31c and 31d. The pulley housings 33 are detachably secured to the ends of the rod by pulley housing splice sections conveniently formed integrally with the pulley housings. As best shown in FIGS. 2 and 4, the pulley housing splice sections include a top wall 45 offset from below the top wall 34 of the pulley housing to extend into the rod below the top wall 11, and forward and rear walls 46 and 47 that respectively extend alongside the intermediate wall 13 and the rear wall 15 of the rod. The pulley housing splice section thus extends inside the rod in the area between the intermediate wall 13 and the rear wall 15 of the rod so as to avoid interference with the drapery carriers, and the lower edges of the pulley housing splice section engage the flange 13b and the bottom wall 16 of the rod to firmly interconnect the pulley housing and rod.

In the embodiment illustrated, the traverse assembly is arranged for two-way traverse and dual master slides 51a and 51b are provided, it being understood that the rods can be used with one-way traverse utilizing only a single master slide. Master slides 51a and 51b are substantially mirror images of each other and like numerals are utilized to designate corresponding parts. The master slides comprise a master slide body conveniently molded of plastic or the like, and having a generally flat configuration with a top wall 53, a rear wall 54 and a front wall 55 joined by end walls 56 and 57. The rear wall 54 is formed with top and bottom flanges 54a and 54b which are vertically spaced apart to slidably receive the upwardly extending flange 16a at the forward edge of the rear cord channel and guidably support the master slide thereon. The top wall 53 of the pulley housing is also formed with an upwardly extending flange 53a having spaced cord receiving notches 53b adjacent opposite ends, which cord receiving notches are preferably angulated inwardly and forwardly from opposite ends of the flange 53a, as best shown in FIG. 2, so as to guide the traverse cord from the rear cord channel forwardly overlying relation with the top wall 53 of the master slide. An opening 53c is formed in the top wall of the master slide to allow the traverse cord to be drawn downwardly therethrough and cord locks shown in the form of notches 56a are provided in one of the end walls 56 of the master slide. Thus, the end portions 31e and 31f of the traverse cord 31 can be drawn downwardly through the opening 53c in one master slide and then knotted in the recessed area under the top wall 53 to connect the ends of the traverse cord to one master slide. An intermediate bight portion 31g formed in the other horizontal run 31c of the traverse cord can be drawn through the notches 53b and downwardly through the opening 53c and attached to the cord lock openings 56a in the other master slide 51b so that the master slides move equally and in relatively opposite directions in response to manipulation of the cord. With this master slide construction, the knots 31e and 31f as well as the bight portion 31g of the traverse cord are disposed in recesses at the underside of the respective master slides so as to avoid interference with the drapery heading during movement of the master slides along the rod.

As previously described, the flanges 12a and 13a of the front carrier channel are disposed at a level above the bottom wall 16 of the rear cord channel and the master slides 51a, 51b each have forwardly extending portions 61 and 62 that extend below the intermediate wall 13 and upwardly extending portions 61a and 62a which extend upwardly into the forward carrier channel 14. The upwardly extending portions 61a and 62a are spaced apart in a direction lengthwise of the rod a distance to receive the head portion 25c of one of the carriers 25 therebetween, to move that carrier along the rod with the master slide, and the upwardly extending portions are preferably interconnected by a member 63 that overlies the head on the carrier 25, as best shown in FIG. 5. The upwardly extending portions 61a and 62a are also guidably supported on the front carrier channel and, as best shown in FIGS. 3 and 5, are formed with guide faces 61b that engage the rearwardly extending flange 12a on the front channel to guidably support the master slide thereon. An upwardly extending flange 66 is also advantageously provided on the top wall 53 of the master slide to engage the rearwardly facing flange 13b on the intermediate wall and aid in guiding the master slide during movement along the rod.

The rod 10 can be formed in several sections indicated at 10a and 10b in FIG. 1 and the sections interconnected by a splice 68. The splice is advantageously located internally of the rod as shown in FIGS. 1 and 3 and includes a top wall 69 and depending front and rear walls 71 and 72. As best shown in FIG. 3, the splice 68 is located in the area between the intermediate wall 13 and the rear wall 15 of the rod, and the front wall 71 of the splice extends closely alongside the intermediate wall and has a depth approximating the spacing between the top wall 11 and the flange 13b so as to laterally and vertically align the track sections in this area. The top wall 69 of the splice is advantageously transversely arched or angulated as shown in FIG. 3 so as to resiliently press the rear wall 72 of the splice downwardly against the bottom wall 16, adjacent its juncture with the rear wall 15 of the rod.

From the foregoing it is thought that the construction and operation of the traverse assembly will be readily understood. The rod provides a downwardly opening front carrier channel and a forwardly opening rear cord channel that is spaced from the front channel to provide a downwardly opening access passageway therebetween, and the master slides are guidably supported at their rear on the forward edge of the rear cord channel. The master slides extend forwardly from the rear cord channel across the access passageway 18 in the rod and below the intermediate wall into the front carrier channel to move a drapery carrier 25 therewith along the rod. The spacing between the rear cord channel and the front carrier track provides an access passageway for receiving the master carrier body and which facilitates connection of the traverse cords to the master carrier. The front carrier channel is shallower than the rear cord channel so that the master carrier extends forwardly from the rear channel below the intermediate wall and then up into the front carrier channel for support thereby. The underside of the master slide thus lies closely adjacent the plane of the underside of the rear cord channel so as to avoid interference with the drapery heading during movement of master carriers along the rod. Moreover, since the rear cord channel extends below the front carrier channel it
also functions as a "light stop" to minimize passage of light in the area between the traverse rod and the drapery heading. The pulley housings have a front channel which forms a continuation of the front carrier channel in the rod to allow the drapery carriers to move along the rod into the pulley housing past the pulleys in the rear cord channel, to thereby minimize stacking space of the carriers when the draperies are opened. The carrier engaging projections on the master carriers are located at the forward ends of the master carriers, that is the ends of the master carriers which lead during closing of the draperies, so as to not only reduce the space between the carriers when the draperies are opened, but to also minimize the stacking space for the carriers when the draperies are closed.

While a preferred embodiment of the invention has been disclosed herein, the invention contemplates such modifications or changes therein as lie within the scope of the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. In a traverse assembly for draperies and the like including an elongated rigid rod structure having a front carrier track and a rear cord track, a plurality of drapery carriers mounted in said front carrier track for movement therealong, a traverse cord in said rear cord track and cord guide means adjacent the ends of said rear cord track for guiding the traverse cord for movement into and out of said rear cord track, and master carrier means operatively connected to said traverse cord, the improvement wherein:

said rod comprises a top wall, a front wall extending downwardly adjacent the forward edge of the top wall, an intermediate wall extending downwardly from said top wall intermediate the forward and rear edges thereof and defining a downwardly opening front channel with said front wall, said front wall having a rearwardly extending flange along its lower edge and said intermediate wall having a downwardly extending flange along its lower edge substantially coplanar with and spaced from the flange on the front wall to define spaced carrier support rails at the lower end of said front channel, a rear wall extending downwardly adjacent the rear edge of the top wall, a bottom wall extending forwardly from the lower edge of the rear wall and defining a forwardly opening channel, said bottom wall having its forward edge spaced rearwardly a substantial distance from said intermediate wall and defining a downwardly opening access passageway between the rear channel and the intermediate wall, said bottom wall having an upwardly extending flange along its forward edge for retaining the traverse cords in said rear channel and defining a rear channel guide rail along the forward edge of said rear channel, said drapery carriers each having a head portion supported on said rails in said front channel and a pendant portion extending downwardly between the rails for attachment to a drapery panel, said master carrier comprising a master carrier body spanning said access passageway between the rear cord channel and the intermediate wall and having rear guide means along the rear side thereof guidably engaging said rear channel guide rail for support thereby, said master carrier body having a portion extending forwardly beneath said intermediate rail, and drapery carrier means on said forwardly extending portion of the master slide body.

2. A traverse assembly according to claim 1 including forward guide means on said forwardly extending portion of the master carrier body guidably engaging at least one of the carrier support rails on said downwardly opening front channel.

3. A traverse assembly according to claim 1 wherein said drapery carrier means on said forwardly extending portion on said master carrier body includes means for engaging one of said drapery carriers to move the latter along the front carrier channel with the master carrier.

4. A traverse assembly according to claim 1 wherein said drapery carrier means on said master carrier includes projections extending upwardly from said forwardly extending portion of the master carrier body into said downwardly opening front channel, said projections being spaced apart in a direction lengthwise of the rod a distance to receive the header portion of one of said drapery carriers therebetween to move the latter along the front carrier channel with the master carrier.

5. A traverse assembly according to claim 1 wherein the underside of the flanges on said intermediate and front walls of the rod are disposed at a level above said bottom wall on the rear wall, the underside of said master carrier being disposed at a level closely adjacent the underside of said bottom flange on the rear wall.

6. A traverse assembly according to claim 1 wherein said rod is formed by first and second endwise abutting rod sections of like cross-section, said intermediate wall having a rearwardly extending flange thereon, and splice means disposed internally of said rod between said intermediate wall and said rear wall, said splice means including a top wall underlying a portion of the top wall on the rod and front and rear depending flanges respectively extending along said intermediate wall and said rear wall with the lower edges of the front and rear flanges on the splice means respectively engaging the rearwardly extending flange on the intermediate wall and the forwardly extending flange on the rear wall.

7. A traverse assembly according to claim 1 wherein said cord guide means including a pulley housing at the end of said rod, said pulley housing including a top wall coplanar with the top wall of the rod, front and intermediate walls respectively aligned with the front and intermediate walls of the rod to form a continuation of the front channel, a rear wall aligned with the rear wall of the rod, a second intermediate wall spaced forwardly from the intermediate wall, and at least one pulley mounted for rotation about a horizontal axis between the rear wall and the second intermediate wall of the pulley housing.

8. A traverse assembly according to claim 7 wherein said intermediate wall on said rod has a rearwardly extending flange thereon, said pulley housing having a splice section of U-shaped cross-section extending into said rod between said rear wall and said intermediate wall on said rod.

9. A traverse assembly according to claim 1 wherein said intermediate wall has a rearwardly extending
flange thereon, said master carrier body having a guide rib engaging said rearwardly extending flange on said intermediate wall.

10. A traverse assembly according to claim 1 wherein said drapery carrier means on said master carrier body includes projections extending upwardly from said forwardly extending portion of the master carrier body into said downwardly opening front channel, said projections being spaced apart in a direction lengthwise of said rod a distance to receive the head portion of one of the drapery carriers therebetween to move the latter along the front carrier channel with the master carrier, and a member extending between the upper ends of said projections and overlying the head on the drapery carrier disposed between said projections.

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