United States Patent [19]

Haarer

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[54] **CARRIER GATE FOR TRAVERSE ROD**

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[73] Assignee: **Kirsch Company,** Sturgis, Mich.

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[52] **U.S. Cl.** ..... **16/94 D;** 160/345; 16/96 D

[51] **Int. Cl.** **A47h 1/04**

[58] **Field of Search** ..... 16/87, 87.4, 87.6, 87.8, 16/94 D, 95 D, 96 D; 160/344, 345, 346, 347

[56] **References Cited**

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Assistant Examiner—Peter A. Aschenbrenner
Attorney, Agent, or Firm—Woodhams, Blanchard and Flynn

[57] **ABSTRACT**

End construction for a traverse rod. In a traverse rod having a closable opening adjacent the end thereof for the insertion of sliders thereinto, a gate for closing such opening is provided which operates entirely in a plane perpendicular to the longitudinal extent of the rod. In this manner it is possible to butt the end of the rod snugly against a wall and still effect opening of said gate for the insertion or removal of sliders as desired.

8 Claims, 8 Drawing Figures

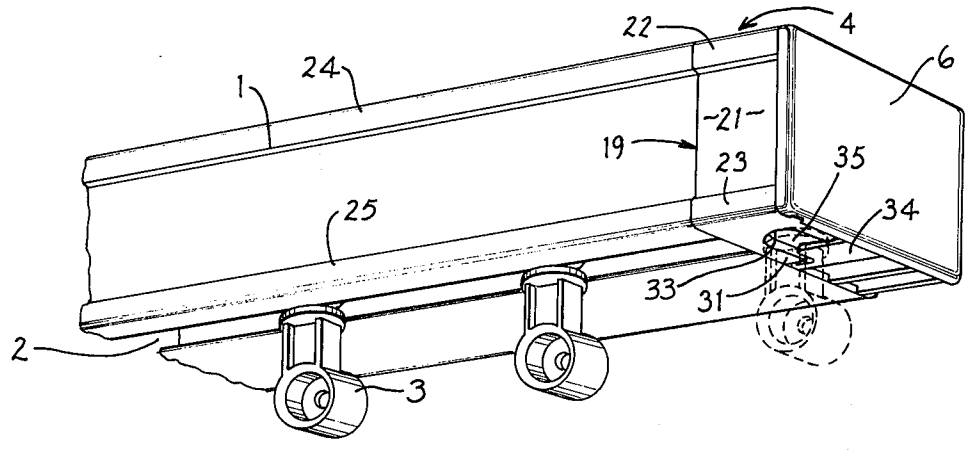


Fig.1

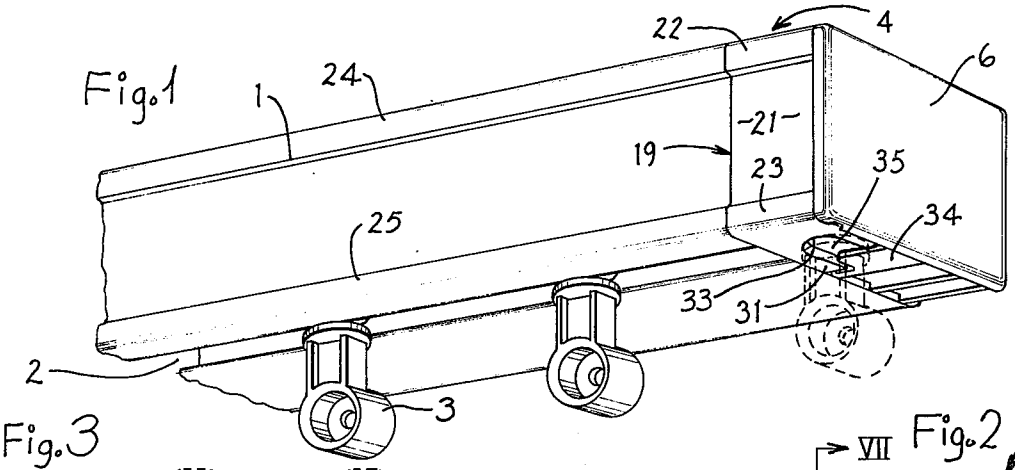


Fig.3

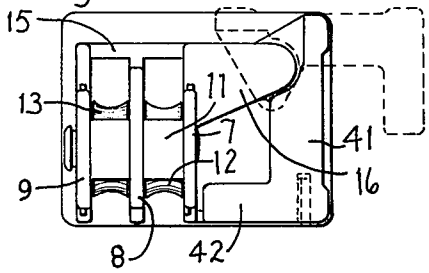
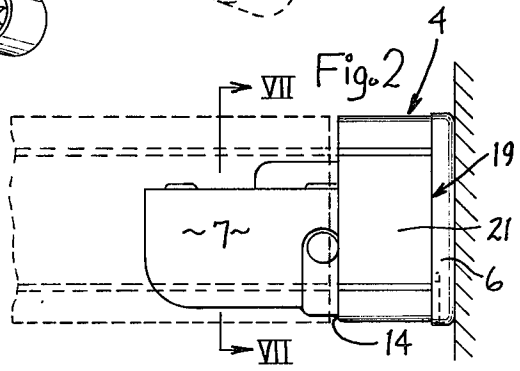


Fig.2



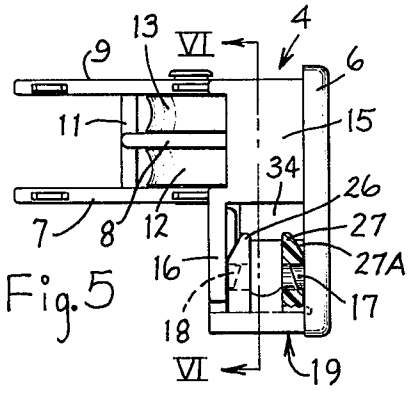


Fig.5

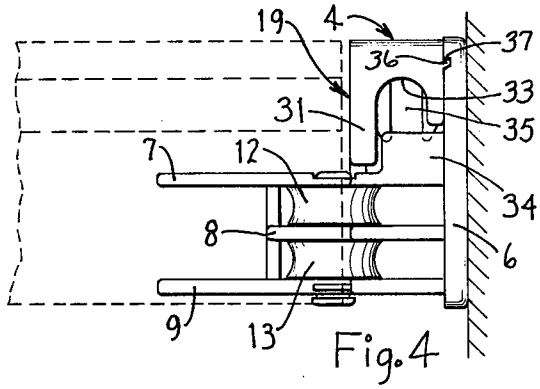


Fig.4

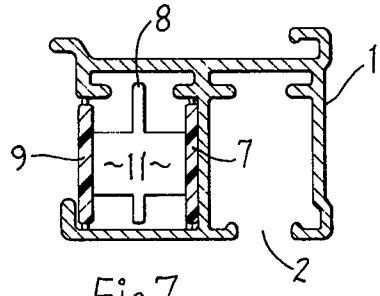


Fig.7

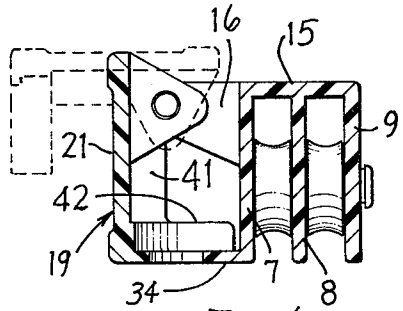


Fig.6

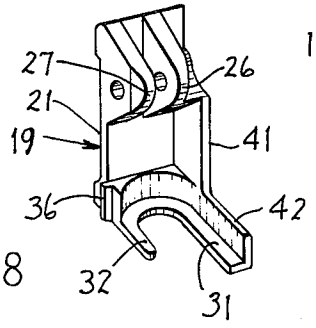


Fig.8

CARRIER GATE FOR TRAVERSE ROD

FIELD OF THE INVENTION

The invention relates to traverse rod construction and particularly to a type of end construction for same which will enable the end of the rod to be butted snugly against a wall and yet enable same to be opened for the insertion and/or removal of sliders as desired.

BACKGROUND OF THE INVENTION

In standard traverse rod installation, it has long been known to extend the drapery and therefore the rod entirely across, and sometimes somewhat beyond, the windows with which the draperies are being used. For many years this raised no particular problem but with the advent of large picture windows and the resulting desire to bring a given window as closely as possible to the walls of the room, it became necessary to provide traverse rods which would be placeable as closely as possible to said walls at either side of the window.

Since traverse rods have for a long time required the insertion of and/or removal of sliders to or from the traverse rod after installation thereof, it has long been known to provide a gate at or adjacent the end of the traverse rod for this purpose. An earlier construction in this respect is illustrated for example by Bell and Ford U.S. Pat. No. 2,889,573, assigned to the same assignee as the present application. However, with the development as above mentioned of the desire for butting the ends of the traverse rod as closely as possible to the adjacent wall, and including particularly constructions wherein the traverse rod was affixed directly to the ceiling, the problems of so inserting and/or removing of such sliders with respect to the traverse rod were substantially complicated. One attempt to meet this problem is illustrated in U.S. Pat. No. 3,503,434 wherein there was provided adjacent the end of the traverse rod a pivoted gate movable in a plane substantially parallel to the longitudinal axis of the traverse rod. This is convenient and effective, permits the easy insertion of sliders into the traverse rod or removal of sliders therefrom but still requires a small amount of space between the end of the rod and the wall. Thus, in a continuing effort to improve this type of drapery supporting apparatus, I have now brought into being a design by which the gate moves in a direction perpendicular to the longitudinal axis of the traverse rod and hence requires no clearance at all between the end of the traverse rod and the adjacent wall.

Accordingly, the objects of the invention include:

1. To provide a traverse rod wherein sliders can be inserted into or removed from the rod as desired and yet wherein the end of the rod may be butted snugly against an adjacent wall oriented at least substantially perpendicular to the longitudinal axis of said rod.

2. To provide a traverse rod, as aforesaid, having a gate structure at or adjacent an end thereof which gate structure requires for manipulation thereof no additional rom beyond the end of said traverse rod.

3. To provide a traverse rod, as aforesaid, in which such gate structure is arranged for movement substantially perpendicular to the longitudinal length of said traverse rod, and thereby parallel to the surface of an adjacent end abutted wall, whereby same may be placed closely adjacent, or against, such a wall without inhibiting the operability thereof.

4. To provide a traverse rod, as aforesaid, wherein the gate structure is extremely simple whereby to minimize its original manufacturing cost, make its operation readily obvious and require virtually no maintenance under ordinary operating conditions.

other objects and purposes of the invention will be apparent to persons acquainted with devices of this general type upon reading the following disclosure and inspection of the accompanying drawings.

In the drawings:

FIG. 1 is an oblique view of the end of the traverse rod of the type in question and provided with the gate of the invention.

FIG. 2 is a side view of said end structure showing same butted against an end wall and further showing in broken lines the relationship of the traverse rod extrusion therewith.

FIG. 3 is an end view of the end structure taken from the leftward end of FIG. 2.

FIG. 4 is a bottom view of the structure shown in FIG. 2.

FIG. 5 is a top view of the structure shown in FIG. 2.

FIG. 6 is a section taken on the line VI-VI of FIG. 5.

FIG. 7 is a section taken on the line VII-VII of FIG. 2.

FIG. 8 is an oblique view of the gate means.

SUMMARY OF THE INVENTION

In meeting the objects and purposes above set forth, there is provided for an extruded traverse rod an end cap, preferably a plastic molding, which carries the cord rollers and is provided with an access gate pivoted to move on an axis substantially parallel to the longitudinal axis of the traverse rod. Said gate has a portion extending across the slot, here on the underside of the traverse rod, in which the sliders are received and operate. Thus, when same is retracted, sliders may be inserted into said slot or removed therefrom. In addition, said portion has a recess therein which will receive a slide in a manner to hold same against sliding and therefore act as an end anchor for the drapery.

DETAILED DESCRIPTION

Referring to the drawings, there is shown in FIG. 1 a type of traverse rod with which the herein illustrated embodiment of the invention is typically used. This traverse rod is in general similar to the one set forth in detail in U.S. Pat. No. 3,503,434 and assigned to the same assignee as the present invention, and hence needs no detailed description here but will be summarized for convenience.

The traverse rod **1** of FIG. 1 preferably comprises a generally tubular extrusion of substantially rectangular cross section and is provided with a slot **2** in the bottom thereof for reception of suitable hangers **3**. The end cap **4** is the subject of the present invention, is a separate component from the tubular extrusion **1** and while conceivably made from a variety of materials is conveniently a plastic molding.

Turning now to the end cap in more detail, there is provided an end plate **6** from which extends three parallel roller supporting flanges **7, 8** and **9**, the middle one thereof in this embodiment being considerably shorter than the other two, in order to save material. Preferably there is also provided a cross member **11** connecting the middle flange **8** with the two outer roller supporting flanges **7** and **9** for the purpose of stiffening each

thereof. Rollers 12 and 13 are rotatably fixed between said flanges as shown in any appropriate manner. The longitudinal extent, lateral spacing and height of said flanges, particularly flanges 7 and 9, are chosen as required to fit snugly into the extruded traverse rod, the cross sectional relationship in this embodiment being as shown in FIG. 7, and the limit of such entry of the end cap into the traverse rod being determined by the step 14 (FIG. 2). A top wall 15 is provided across the upper side of said roller supporting flanges 7, 8 and 9 for further stiffening purposes.

A gate mounting flange 16 projects laterally from the flange 9 parallel with the end plate 6 and cooperates with said end plate for mounting the closure gate 19. While the pivoting relationship between the hereinafter described closure gate on the one hand, and said gate mounting flange and end wall on the other hand, may be provided in any of several specific ways, there is here provided a pair of stub pivots 17 and 18 extending coaxially toward each other from the flange 16 and the end wall 6 and which are preferably beveled at their opposed ends for purposes appearing further hereinafter.

The gate 19 itself comprises a wall 21 substantially equal in height to the height of the end plate 6 and equal in width to the distance from the inner surface of said end plate to the remote surface of the flange 9 which latter-named surface is in substantial alignment with the step 14. The outer surface of said wall 21 is preferably contoured to match the corresponding portion of the traverse rod 1, in this embodiment being provided with the ridges 22 and 23 to align with the ridges 24 and 25 of the traverse rod. A pair of pivot flanges 26 and 27 extend from the upper end of said wall 21 parallel with respect to each other and perpendicularly to said wall 21. A pair of openings are provided within said pivot flanges for reception of said stub pivots 17 and 18. Said pivot flanges are preferably tapered at their ends, as at 27*a*, to cooperate with the tapered ends of the stubs 17 and 18 to facilitate their being pushed past said stubs in assembly.

At the lower end of said wall 21 there is provided a pair of prongs 31 and 32 which define a recess 33, the same being in alignment with the slot 2 of the traverse rod wherein the hangers are suspended. A small plate 34 preferably projects from the end plate 6 and the flange 7 to cooperate with said prongs for defining an opening 35. Any convenient means, such as a projection and notch combination appearing at 36 and 37 (FIG. 4) may if desired be provided for positively holding said gate closed when desired.

Further flanges 41 and 42 (FIGS. 3 and 6) may be provided projecting inwardly from the wall 21 and upwardly from the prong 31 both perpendicular to said wall 21 for stiffening purposes.

In use, the end cap is installed into the desired position at the end of a traverse rod and the draw cord thereof installed in a known manner. A supply of hangers may either be installed into said traverse rod prior to the application thereto of the end cap or if preferred may be installed by opening of the gate after said end cap has been applied. In either event, it will be apparent that by opening said end cap as shown in broken lines in FIGS. 3 and 6 of the drawings, the end of the slot 2 is uncovered and further hangers may be installed into the traverse rod or hangers may be removed therefrom as desired. In finalizing the traverse rod ready for use, one further hanger will be placed into the recess 33 and gate 19 then closed down against the plate 34. Thus, the hanger so positioned, as appearing in broken lines in FIG. 1 of the drawings, will provide an end anchor for the drapery in the same manner as set forth in detail in the above-mentioned U.S. Pat. No. 3,503,434.

It will be recognized that the device above described may be made inexpensively yet accurately by relatively simple molding procedures, such as injection molding, that the end plate 6 may be butted against an adjacent wall without interfering with the operation of the gate and that the unit when closed, especially by appropriate choices of materials and colors, will provide substantially the appearance of a continuation of the traverse rod to the wall.

While a specific embodiment of the device of the invention has been illustrated and described for disclosure purposes, it will be well recognized that the broader concept of the invention may be applied through a variety of further embodiments and accordingly the hereinafter appended claims will include such further embodiments excepting as said claims may by their own terms specifically limit otherwise.

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

1. A gated end cap engageable with the end of a traverse rod slotted for sliding drape hangers and adapted to end abut a building wall, and snugly locate a drape edge thereagainst, said end cap including in combination:

an end plate;

a plurality of roller supporting flanges extending perpendicularly from said end plate for telescopic cooperation with said traverse rod and at least one cord roller rotatably arranged between said flanges, said end plate, roller supporting flanges and traverse rod end defining a vertically and forwardly opening gap of width slightly exceeding that of a drape anchor hanger;

a gate in said gap forwardly and upwardly pivotable about an axis located above the bottom of the end cap, said axis being substantially perpendicular to the plane of said end plate and substantially parallel to the longitudinal extent of said roller supporting flanges, said gate having a front wall and a bottom wall, said gate when opened opening the front of said end cap and when closed providing means on said bottom wall extending across and closing the end of the traverse rod slot;

a gate mounting flange projecting forwardly into said gap and adjacent the traverse rod end from one of said roller supporting flanges, said gate mounting flange being spaced from and parallel to said end plate, a pair of pivot flanges extending from said gate for reception between said gate mounting flange and said end plate and means effecting pivotal relationship between said pivot flanges and gate mounting flange and end plate, wherein the gate pivot axis is spaced rearwardly and below the top of the gate front wall.

2. The device of claim 1 wherein said gate when closed is a substantial continuation of the adjacent front and bottom of said traverse rod.

3. The device of claim 1 including cooperating fixed element detent means on said gate and end plate snap engageable for holding said gate in closed condition.

4. The device of claim 1 in which said front gate wall upstands from said gate bottom wall and including means on the gate bottom wall for supporting an anchor hanger when said gate is closed.

5. The device of claim 4 wherein the bottom wall of said gate terminates in a pair of spaced prongs, said prongs defining a portion of the boundaries of an anchor hanger receiving opening having an axis extending along said front wall and including further a plate substantially coplanar with said prongs and fixed with respect to said end plate for defining the remaining boundary of said opening.

6. The device of claim 1 wherein said gate comprises a generally L-shaped member with said front wall upstanding and bottom wall extending rearwardly therefrom and carried thereby for receiving and supporting in nonsliding condition an anchor hanger, said bottom wall being substantially coplanar with the bottom of said traverse rod in the closed position of the gate.

7. The device of claim 1 in which said gate bottom wall carries an upstanding wall for axially blocking the hanger slot of the traverse rod in the closed position of the gate, said gate front wall pendently and substantially perpendicularly supporting said bottom wall and being substantially coplanar with the side of said traverse rod in the closed position of the gate, said pivot axis being spaced inboard of the traverse rod top and side planes.

8. The device of claim 1 in which said bottom portion of said gate is recessed for receiving and axially fixedly locating an anchor hanger at a location spaced below said pivot means.

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