March 4, 1969 R. S. STECK ET AL 3,430,678

TRAVERSE ROD ASSEMBLY

Filed Oct. 13, 1966 Sheet 1 of 4

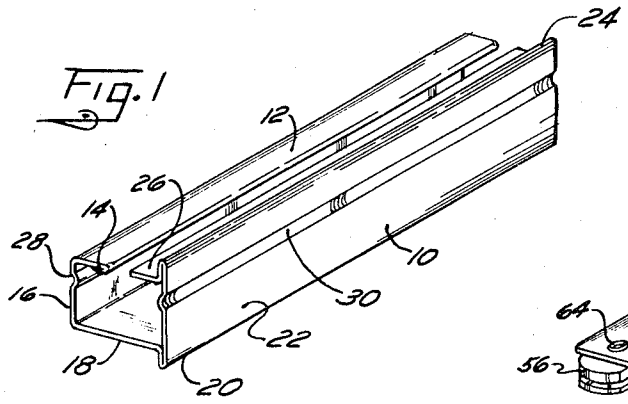


FIG. 1

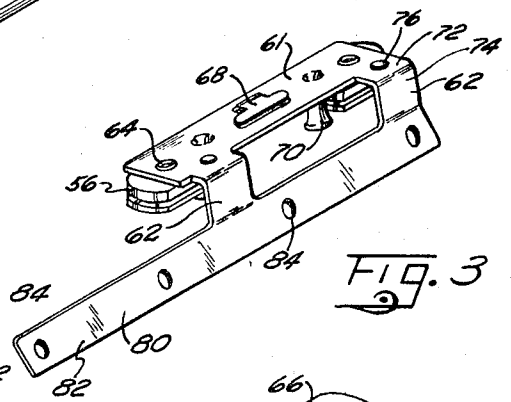


FIG. 3

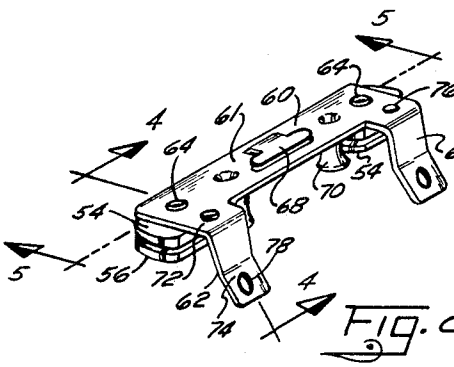


FIG. 2

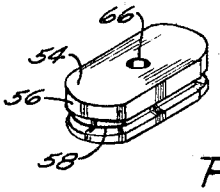


FIG. 6

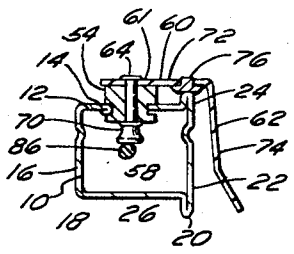


FIG. 4

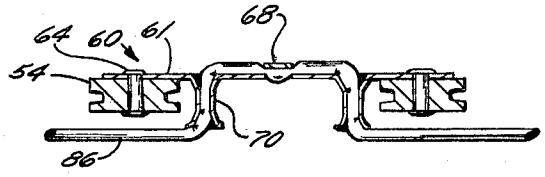


FIG. 5

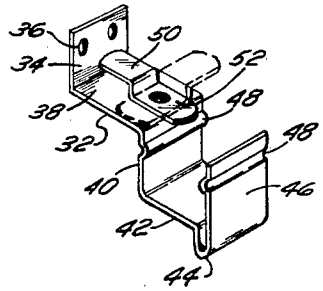


FIG. 7

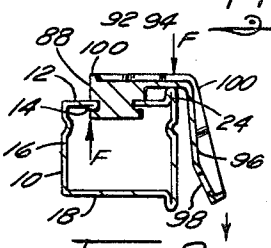


FIG. 8

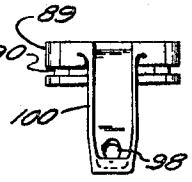


FIG. 9

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TRAVERSE ROD ASSEMBLY

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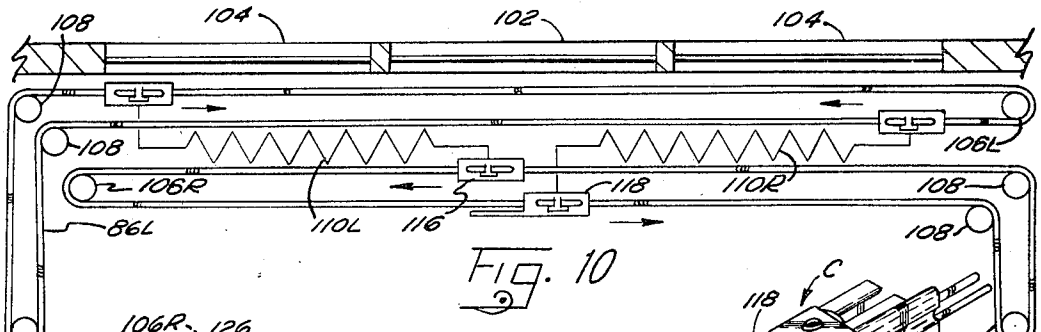


FIG. 10

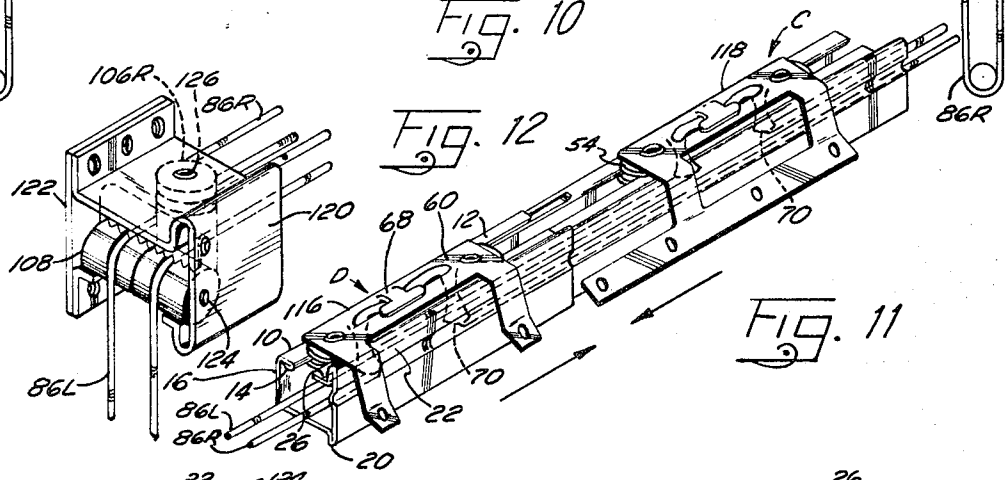


FIG. 12

FIG. 11

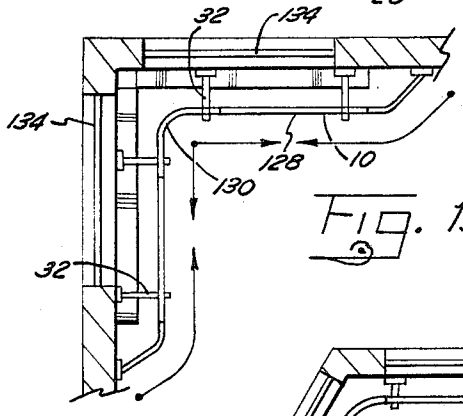


FIG. 15

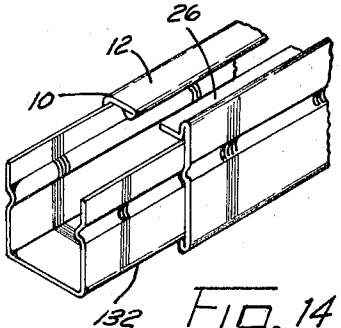


FIG. 14

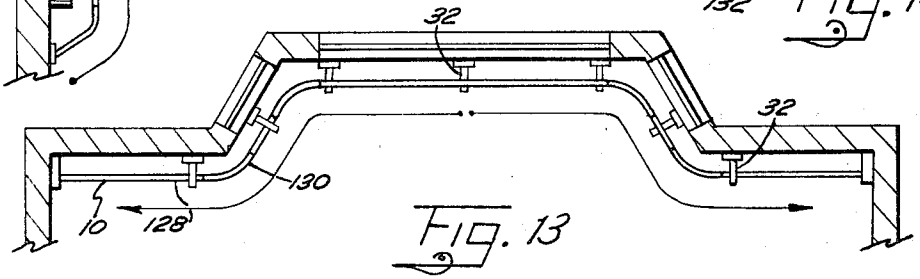


FIG. 13

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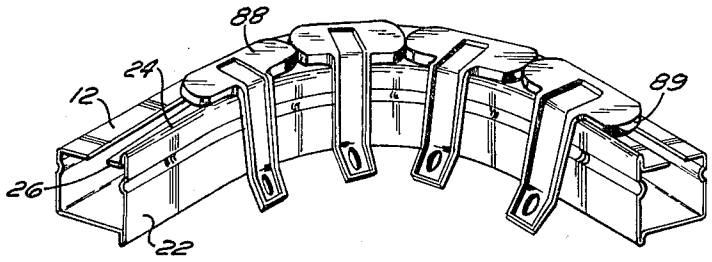


FIG. 16

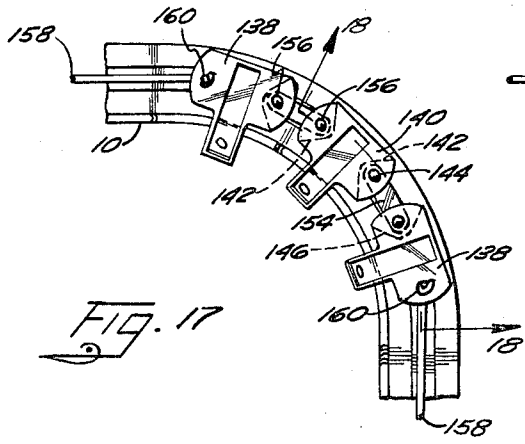


FIG. 17

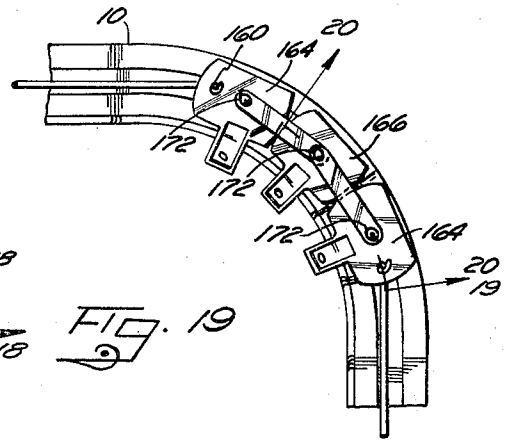


FIG. 19

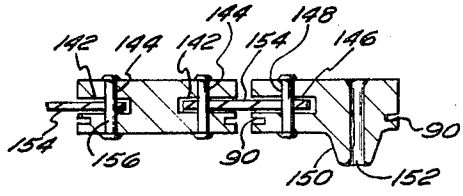


FIG. 18

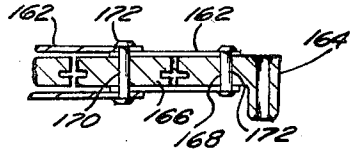


FIG. 20

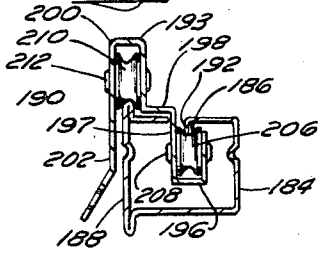


FIG. 21

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TRAVERSE ROD ASSEMBLY

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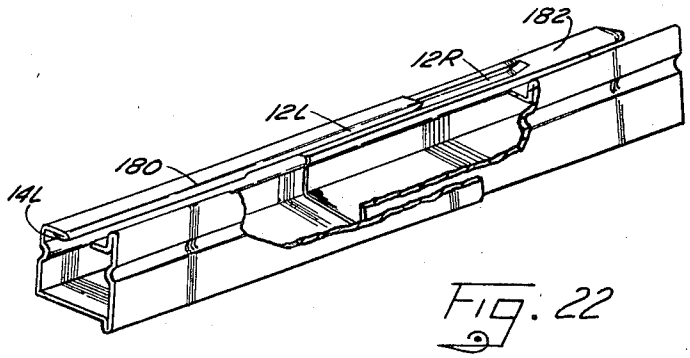
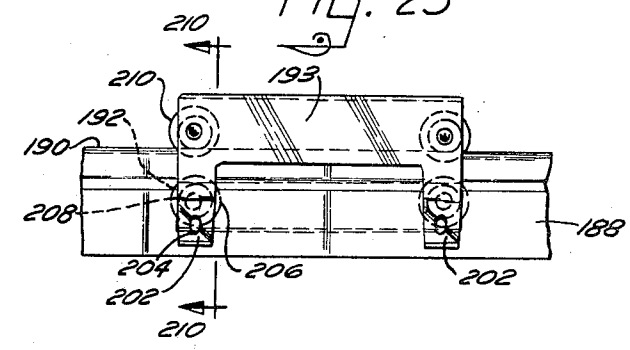


FIG. 22

FIG. 23



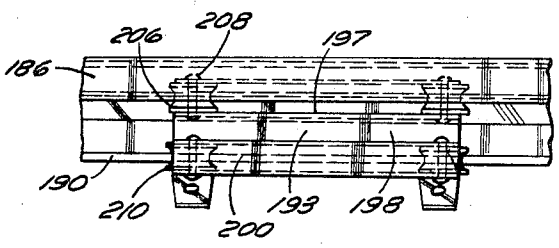


FIG. 24

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United States Patent Office 3,430,678
Patented Mar. 4, 1969

3,430,678

TRAVERSE ROD ASSEMBLY

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Filed Oct. 13, 1966, Ser. No. 586,448
U.S. Cl. 160—346 8 Claims
Int. Cl. A47h 5/03, 1/022

ABSTRACT OF THE DISCLOSURE

A traverse rod assembly comprising a track having a rectangular cross section with a slot in the top thereof spaced from both vertical walls, with trolleys and guides alike being characterized by drapery hook ears extending to one side of said track to support draperies outside the vertical projection of the track and being supported by the rear flange of said slot and the front wall of said track, the supporting means of said trolleys and glides being capable of following a horizontal curve in said track, and a two-rope rigging system adapted to close a windowed surface or to open optionally either the center or the sides thereof.

This invention relates to an improved traverse rod assembly.

House construction today frequently provides a large double-glazed fixed window flanked on either side by smaller windows which may open in order to provide ventilation. This combination of windows is frequently expanded as far as the room which it serves will permit; meaning, of course, that on one or both sides of the combined window unit the wall space from the room corner to the edge of the unit may be a matter of only a few inches. Furthermore, materials which are employed for draperies are often heavy and bulky and cannot be compactly stored or collapsed on a traverse rod. Thus, with conventional rods, the storage of the draperies at the outer ends of the rods often perpetually obstructs or partially obstructs the ventilating windows.

One object of this invention, therefore, is the provision of a traverse rod assembly which affords a substantially greater manipulative scope to the handling of draperies such that the draperies may be stored not only against the outer extremities of the traverse rod, but may also be stored against the inner fixed pane of the window unit in either collapsed or partly extended position so as to provide for unimpeded ventilation. This latter mode of storage, in addition to the conventional mode, is not inconsequential. The flanking windows are usually quite small in comparison with the central pane, are broken up by cross strips, and, at the time ventilation is desired, are screened. Thus, by covering the central fixed pane with the draperies and leaving the flanking windows exposed, the desired privacy and screening from outside view will be provided, while at the same time, permitting ventilation. Likewise, the decorative value of the draperies will be present in substantial measure when in such position.

Another object of this invention is the provision of a traverse rod assembly whereby draperies may be hung on curved lines, as around three sides of a bay, for instance, and yet which operates smoothly and without jamming in the course of manipulation.

Another object of this invention is the provision of a traverse rod assembly which operates with smoothness and ease greatly superior to conventional rod assemblies in conventional usage. The assembly is easily attached to and demounted from walls and is sturdy in structure and more attractive to the eye than conventional assemblies.

More specifically, another object of the present invention is the provision of a traverse rod assembly characterized by a traverse rod of novel cross section and the relationship of a novel guide thereto which results in a smooth and easy operation, an ability to traverse curves in the traverse rod, an enclosure of the operating cords therefor in a fashion to avoid interference between the cords and the trolleys and the followers moved thereby, and an ability to support draperies outwardly from the vertical axis of the rod so that the rod may be covered by the top edge of the draperies without an outward deflection of that edge, in a fashion which assures a strong support and yet easy, friction-free movement.

Other objects and advantages of this invention will be apparent from the following figures in the drawings, of which:

FIG. 1 is a perspective view of the channel of the assembly;

FIG. 2 is a perspective view of one form of a trolley of the invention;

FIG. 3 is a perspective view of a trolley with a drapery overlap arm similar to that shown in FIG. 2, and designed to work in cooperation with the trolley of FIG. 2;

FIG. 4 is a section taken along the line **4—4** of FIG. 2 looking in the direction of the arrows showing the trolley as associated with the channel of FIG. 1;

FIG. 5 is a longitudinal section through the trolley of FIG. 2 taken along the line **5—5** of that figure looking in the direction of the arrows and illustrating the cord in its relation to the trolley;

FIG. 6 is a perspective view of a glide shown as employed with the trolleys of FIGS. 2 and 3;

FIG. 7 is a perspective view of the bracket by which the channel is mounted to a wall;

FIG. 8 is a transverse section through the channel and an associated follower;

FIG. 9 is a side elevation of a follower and may be regarded as viewing the follower of FIG. 8 from the right side thereof;

FIG. 10 is a diagrammatic representation of the cord and trolley arrangement shown in conjunction with a diagrammatic representation of a window unit consisting of a fixed central pane and flanking, opening windows, illustrating the mechanism whereby the draperies may be opened either to the center or to the ends;

FIG. 11 is a perspective view of a central section of channel with two trolleys thereon illustrating, partly in phantom, the arrangement of cords by which the effect of the showing of FIG. 10 is achieved;

FIG. 12 is a perspective view, partly in phantom, of an end of the channel illustrating the cord hardware;

FIG. 13 is a diagrammatic representation in plan of the channel of this invention shown applied to a bay;

FIG. 14 is a perspective view of the end portion of a length of channel showing a channel connector inserted partially thereinto;

FIG. 15 is a view similar to FIG. 13 illustrating the application of this invention to a window corner of a room;

FIG. 16 is a perspective view of a plurality of followers mounted to a curved section of channel illustrating the nature of the passage of the followers through a corner in such fashion as to avoid jamming or binding;

FIG. 17 is a top plan view of a trolley alternative to those of FIGS. 2 or 3 mounted to a section of channel;

FIG. 18 is a section taken along the line **18—18** of FIG. 17 looking in the direction of the arrows;

FIG. 19 is a top plan view of a trolley mounted to a section of channel somewhat similar to that of FIG. 17 differently assembled;

FIG. 20 is a section taken along the line **20—20** of FIG. 19 looking in the direction of the arrows;

FIG. 21 is a vertical section through a channel and an alternative form of follower or trolley in section;

FIG. 22 is a perspective view of lengths of joined channel, broken away in part, illustrating an alternative method of connecting such lengths;

FIG. 23 is a side elevation of a trolley and constructed in accordance with teachings of FIG. 21; and

FIG. 24 is a top plan view of the trolley of FIG. 23.

Referring to FIG. 1, the channel **10** of this invention is formed from a strip of metal by bending to define a top, flat, inwardly facing flange **12** having an underturned bead **14** therealong, a vertical back wall **16**, a flat bottom wall **18**, a lower lip **20** extending downwardly from the front edge of the bottom wall **18**, a front face **22** extending continuously upward from the lower lip **20**, an upper bearing rib **24** continuous with the front face **22**, and a front, inwardly directed flange **26** facing the back flange **12**. The facing flanges **12** and **26** define a track along which the trolleys and followers, hereafter described, move. The front flange **26** extends inwardly down from the top edge of the bearing rib **24** by virtue of a refolding of the metal thereof. The back side **16** and the front face **22** have longitudinal grooves **28** and **30** respectively pressed thereinto. It will be noted that the channel is to be employed in the position illustrated, with the gap between the flanges **12** and **26** facing upward and the front face and bottom of the channel presenting a relatively unbroken view to the room in which the channel is mounted.

A hanger **32** for the channel is illustrated in FIG. 7. It is formed to embrace the back, bottom and front of the channel, and includes a latch whereby the channel may be locked into the hanger. The hanger is likewise a strip of metal bent to define a vertical mounting plate **34** having screw holes **36** therein for the attachment of the bracket to a wall. A leg **38** extends outwardly from the bottom of the plate so as to space the channel outwardly a short distance away from the wall. From the leg, the metal extends downwardly as at **40**, forwardly as at **42**, defines a channel **44** to receive the lower lip **20** of the channel **10**, and then extends upwardly as at **46** to embrace the channel as described. The mounting bracket is supplied with inner embossed ribs **48** adapted to seat in the grooves **28** and **30** of the channel so as to provide a detent for the channel. A swinging latch **50** is pivotally riveted to the top of the leg **32** to be rotatable to a position where one end **52** thereof extends partially over the back flange **12** of the channel to lock the channel positively in place or to be removed from such position so as to permit withdrawal of the channel from the bracket.

In FIGS. 2 and 3 are illustrated the trolleys of the invention. The trolley **60** of FIG. 2 consists generally of an elongated metal strip **61** having two ears **62** extending transversely from one side thereof and bent downwardly at substantially a right angle of the plane. At each end of the strip, a glide **54** is pivotally riveted at **64** to the under side thereof.

The glide is particularly illustrated in FIG. 6. It consists of an elongated block of plastic such as nylon or the like, having good wear and anti-friction characteristics. The block has ends **56** rounded on a radius equal to half the length of the block, and has a circumferential groove **58** about the sides and ends thereof somewhat below the midpoint of the vertical dimension. A rivet hole **66** is formed vertically through the center thereof. The grooves **58** in the longitudinal edges of the glides **54** are adapted to engage the edges of the flanges **12** and **26** of the channel **10** as may be best seen in FIG. 4. The rivet **64** will be passed through the preformed hole **66** in the glide **54**.

Centrally of the strip **61** a T-shaped tab **68** is struck out of the metal of the strip and displaced slightly above the plane thereof, under which a cord **86** will be lodged in anchored relation. The relatively sharp edges of the tab and the sharp turns imposed on the cord by the tab insure a non-slipping relation of the cord therewith.

On either side of the tab and between the tab and the rivets **64**, a pair of cord tubes **70** are situated. The cord tubes may be struck out of the metal of the strip **61** or, probably better, may be riveted into appropriate holes formed in the strip **61**, to extend downwardly therefrom. The tubes desirably are flared at both their upper and lower ends and extend well below the glides **54**.

It will be appreciated that the glides, contained between the facing flanges **12** and **26** of the channel, support the metal strip **61** appreciably above the level of the bearing rib or rail **24**. Likewise, the ears **62** stand horizontally outward over the rail from the main body of the strip **61**, as at **72**, before being bent downward at **74**. A hole is formed in the horizontal portions **72** of each of the ears centrally over the rail **24**, and a headed bearing member **76**, desirably made of nylon or the like, is inserted into these holes, heads end down. The ears have holes **78** formed in their lower extremities for the reception of drapery hooks.

The trolley illustrated in FIG. 3, is the same in all respects as that illustrated in FIG. 2, except that the ears which terminate in free ends in FIG. 2 terminate here in an overlap strip **80** extending longitudinally of the trolley and horizontally beyond the trolley at one end **82** thereof. The overlap strip is provided with a plurality of drapery hook holes **84**.

FIGS. 4 and 5 illustrate the relation of the operating cords to the trolleys, whereby the trolley is anchored to a cord at a particular point along its length. The running part of the cord **86** lies below the trolley. The part engaged by the trolley extends up through one of the cord tubes **70**, under the tab **68**, and down through the other cord tube to a position again below the trolley. The tab **68** tightly accommodates the cord between its edges and the aperture out of which it was struck so as to prevent slippage. For adjustment of the trolley along the length of the cord, the cord may be displaced out from under the tab and the trolley moved to the desired point on the cord, at which point the cord will again be locked under the tab. It will be noted that the cord is thus suspended and maintained well below the glides, so as to avoid any possibility of jamming between the cord and the glides.

The followers **88** from which the draperies are hung between their ends are shown in FIGS. 8 and 9. They are, in their track-engaging portion, very similar to the glides **54**, being elongated blocks of nylon or other suitable wear-resistant and friction-free materials, similarly rounded at their ends **89** and circumferentially grooved, as at **90**, above the lower edge thereof. They extend above the level of the rail **24**, as at **92**. An integral tongue **94**, equal in thickness to the vertical distance between the rail **24** and the top surface **92**, extends laterally from the block and then bends vertically downward outside the rail **24**, as at **96**, to constitute a drapery hook ear. The ear has a hole **98** therein for the reception of the drapery hook and includes a peripheral reinforcing rim **100** to impart additional strength and rigidity.

It will be noted from FIGS. 4 and 8 that the grooves of the trolley glides and the followers fit snugly the back flange **12** of the channel with its recurved edge, but fit loosely the front flange **26**. Thus, the front flange plays a guiding function only for the glides or followers, but not a supporting function for whatever load may be imposed on them by the hung draperies. Rather, the rib or rail **24** serves the load-bearing function. It will be appreciated that the more widely spaced the two points of support for the trolleys or followers are, the less well be the torsional load placed on them. The back flange, being the most directly supported by the brackets **32** and having the recurved edge **14**, will have relatively good rigidity. The rigidity of the front flange **26** will be relatively poor. By transferring the load to the relatively vertically wide front surface, as to the rail **24**, the load is transferred to a vertically strong portion of the channel **10**, and likewise the lever arm of the support is increased. The points of

force and support application will be noted in FIG. 8, marked F.

FIGS. 10, 11, and 12 illustrate the application of the traverse rod assembly to the previously described window assembly. In FIG. 10 the window group consists of the large central double-glazed stationary window **102** and the two flanking ventilating windows **104** of, for instance, the double hung or casement type. A double set of cords **86** is employed, respectively identified as either **86**–L or **86**–R, contained in a single channel. As shown in FIG. 10, the cord system **86**–L is operated from the left side of the window, and the cord system **86**–R is operated from the right side of the system, although both sets could be operated from the same side of the window, subject to possible confustion as to which cord performs which function. The showing here is simply to facilitate description of the operation of the system. As shown, each cord forms a continuous loop extending through the channel from opposite ends thereof to reversing pulleys **106**–L and **106**–R, respectively, at the opposite ends of the channel. At the entering ends of the loops, the two sides of the loops are entrained over pulleys **108** so that the free end of the loop hangs out and downward of the channel in conventional fashion. Associated with the traverse rod assembly will be a left hand and right hand drape **110**–L and **110**–R. One cord system will carry the outside trolleys **112** and **114**, and the other cord system will carry the inside trolleys **116** and **118**. The two trolleys associated with each cord set **86**–L and **86**–R will be situated on opposite sides of the cord loop as determined by the reversing pulleys **106**–L and **106**–R. The left end of drape **110**–L will be secured to trolley **112**, and the right end to trolley **116**, and the left end of drape **110**–R will be secured to trolley **118**, and the right end to trolley **114**. The drapes will be supported between their ends by followers, also engaged in the channel track, but not shown here in order to simplify the drawing.

FIG. 11 illustrates the actual accommodation of the cords and two of the trolleys within the channel.

FIG. 12 illustrating the central portion of FIG. 10, shows the trolley **116** and the trolley **118**. These two trolleys are mounted to the two sides of cord **86**–R, and it will be readily appreciated that the trolleys **112** and **114** will be similarly attached to the two sides of the cord **86**–L outside the ends of the portion shown in FIG. 11. It will be noted that the cord tubes **70** maintain the cords well below the movement of the trolleys and out of the way of possible entanglement. It will be appreciated also that in some circumstances it may be desirable to have cord tubes **70** on one trolley of different length from the cord tubes on another trolley in order to obtain a different vertical location of the cords. It will also be noted that the cords lie neatly and in orderly fashion in the channel, that they are totally enclosed except for the slot opening in the top of the channel, and how unlikely is an escape of the cords from the channel.

The pulley hardware, appearing diagrammatically in FIG. 10 as **106** and **108**, may be that commonly employed in traverse rods, with evident adaptations to the channel structure described here, or it is suggested that it may take the form illustrated in detail in FIG. 12. In that figure a short end section **120** is shown having a configuration adapted to receive telescopically an end of a channel section **10** and including a rearward extension with a wall mounting back plate **122**. A pin **124** spans the end section **120** horizontally and mounts rotatably a pair of grooved spools **108** for the loop sides. A pin **126** spans the end section vertically and similarly mounts a single grooved spool **106R** for loop end anchorage. The bottom of the end section may be cut away as at **127** for a free fall of the operating bight of the cord loop. It will be understood that although the cord loops are shown as continuous, they may be cut and knotted or may be free-ended lengths for purposes of entrainment over the operating hardware. Also, as will be seen later, they may terminate at each end at one of the trolleys to constitute an effective loop, if not an actual one. Thus, applying this showing to FIG. 10, the two sides of the cord loop **86L** are shown entrained over the spools **108** and emerging from the channel, and the cord loop **86R** is shown entrained over the spool **106R** for purposes of end anchorage and reversal. It will be appreciated that with this structure, the end of the channel can be attractively capped so as to maintain its sightliness.

FIG. 13 illustrates the application of the traverse rod assembly to a bay. Both straight and curved sections of channel, **128** and **130** respectively, will be offered which can be formed to various lengths and the curved sections to various radii, and these sections joined as desired by connectors **132** illustrated particularly in FIG. 14. The connectors may be channel-shaped members having an exterior configuration identical with the interior configuration of the channel **10** proper on the back, bottom, and front, but lacking any correspondence to the flanges **12** and **26**. Thus channel sections can be butted together on the connectors **132** without any impairment to the continuity of the glide track defined by the flanges **12** and **26** across abutting sections.

FIG. 15 illustrates a channel configuration where windows **134** on two sides of a corner are to be draped. The utility of being able to unveil the windows by collapsing the drapes either to the center or to the ends of the drapery channel **10** will be particularly noted. The decorative value of the drapes being gathered to the center of the channel in the corner itself will be notable in that a corner often lacks interest, and the location of the drapes there can supply a decorative component which may be strongly needed.

It will be noted in this figure that the corner turns of the channel are somewhat tighter than those illustrated in FIG. 13.

In FIG. 16 the particular adaptation of the followers **88** of this invention to such curved channel passages will be appreciated. The ends **56** are formed on a radius equal to half the length of the followers or glides, and thus meet each other squarely to provide a direct application of pressure as between consecutive glides. It will be appreciated, of course, that any collapsing of the draperies requires a pushing as between the followers. Thus the moved trolley encounter the first follower and pushes it along until it, in turn, encounters the next follower, etc. This transmittal of motion or force through the train of followers leads commonly to jamming with conventional traverse rod equipment even in straight traversals, but with the followers described here such jamming does not occur. The relatively great length of the followers in comparison with their width and the long bearing surface on the track maintains their desired orientation. Again, with conventional equipment the possibility of jamming over a curved track is substantially greater. The followers are apt to overlap one another under the most favorable circumstances, and lock. The followers described here, however, move with equal ease and facility and a freedom from jamming through a curved track as well as through a straight one.

For exceedingly tight corners, such as might be found in the sort of application illustrated in FIG. 15—that is, a corner window installation—the trolley configurations illustrated in FIGS. 17 through 20 may be preferred. The trolleys consists of assemblages of followers substantially identical with those shown in FIGS. 8 and 9 linked together in a train.

The trolley **136** shown in FIGS. 17 and 18 consists of three connected members, two end members **138**, and one center member **140**, all of which resemble closely the followers **88** with, however, some modification. The center member **140** is nearly identical with the followers except that horizontal recesses **142** are formed in the ends thereof shortly above the peripheral grooves **90**, and rivet holes **144** are formed vertically to extend through the

recesses **142**. The end members **138** have similar recesses **146** and rivet holes **148** formed in their inside ends adjacent the center member, and downwardly elongated bosses **150** at their outside ends, vertically perforated as at **152**, to constitute a cord tube equivalent to the tubes **70** of the first described form of trolley. The members are connected together by flat metal links **154** pivotally contained at each end in adjacent recesses **142** and **146** of the center and end members respectively by rivets **156**. The cords **158** here may be attached to the trolleys by feeding an end of the cord up through the cord tube **152** and knotting it as at **160**.

In the discussion of the mechanism shown in FIGS. 10 and 11, it will be recalled that in the doubly functional drape hanging system, the adjacent drapery edges, for instances, are hung on the trolleys associated with the same cord but on opposite sides of the reversing pulley. Where, as here, the cord is not continuous, the cord connections may be made by connecting one of the trolleys at one end to a length of cord, carrying that cord around the reversing pulley **106**, and knotting it at its other end to the other trolley. The other ends of the trolleys will have a cord knotted thereto which will constitute the pendant portion of the cord loop by which the trolleys are operated.

The trolley shown in FIGS. 19 and 20 is essentially identical with that shown in FIGS. 17 and 18 except that the links **162** connecting the trolley members are situated on the top and bottom of the members **164** and **166** instead of being housed in the recesses **146** of the modification of FIGS. 17 and 18. To this end, the end member **164** have vertical holes **168** therethrough displaced toward the inner end of the members, and the center member **166** has a central hole **170** vertically therethrough. Rivets **172** pivotally secure the flat links **162** across the flat top and bottom surfaces of the members to the end members and the center member. The links connecting one end member overlap those connecting the other end member upon the center member, but as the upper links ride above the track and the lower links ride below the track and well within the channel **10**, there is no interference with function.

It was described above that in the assembly of channel sections, either for a long straight run or for one of the bay structures illustrated in FIG. 13 or 15, that the connectors **132** would be used.

These connectors are well suited to a professional installation where the working properties of the channel are well-known and measurements are precise. However, traverse rod assemblies are often installed by the homeowner himself, and in such instance, measurements are likely to be inexact. To meet this circumstance the structure illustrated in FIG. 22 is suggested. The teaching here is of telescoping sections which provide a range of accommodation to compensate for such inaccuracies or the absence of cut-off tools.

There is shown in FIG. 22 a left-hand channel section **180** and a right-hand channel section **182**, both being identical in cross-section with the track **10** of FIG. 1 except in their overlapping areas. Adjacent the end of section **180**, the underturned lip **14–L** of the back flange **12–L** is coined or flattened upwardly against the back flange so as to arrive at an effective thickness of the back flange equal to one-half the normal edge portion thickness as augmented by the underturned lip **14–L** and in alignment with the top surface of the back flange **12–L**. The channel section **182** in the overlapping area is similarly coined downward to reduce the effective thickness of the back flange **12–R**, again, to one-half its normal thickness, but in the case of this section, the continuous surface is the under surface of the folded lip. Otherwise, as between these sections **180** and **182**, the remaining surfaces of section **182** will desirably be reduced to be accommodated telescopically within the section **180**. The coining of the two back flanges is, of course, to arrive at a telescoped portion which is no thicker than the normal thickness of the back flange with the underturned lip since the grooves of the glides or followers accommodate the back flange snugly. On the other hand, with the loose fit of the glide grooves on the front flanges of the channel, an irregularity of path is of no critical consequence and a simple overlap is possible. The telescoped connection of channel sections will not result in as smooth an operation of the traverse rod structure, but as stated above, it lends itself well to amateur installation and, therefore, is a desirable manufacturing alternative.

The particular combination of glide and channel structure hitherto described functions smoothly and well and is characterized by notable simplicity. However, the channel contemplated in conjunction with this invention suggests an alternative form of trolley or follower which is illustrated in FIGS. 21, 23 and 24. This alternative form is related to the first described form in that the torsional load is carried by a reinforced back flange **186** and by a vertical front wall **188** of substantial width with an upper bearing rib **190** at the top edge thereof. In the effectuation of this modification, the channel **184** is modified only slightly in that, instead of the bead of the first described form being turned under through 180° it is turned down as at **192** through 90° so as to define a downwardly projecting rail from the front edge of the back flange **186**.

FIGS. 23 and 24 illustrate specifically a trolley whereas FIG. 21, showing the trolley in section, may be regarded as illustrating a follower as well. In these figures, a plate **193** is bent into laterally and transversely displaced U's to provide journals for rollers which would ride respectively against the underside of the edge **192** of the back flange and against the top rib **190** of the front face **188** of the channel. Thus, an essentially rectangular sheet of metal is bent along one longitudinal edge into a bottom, upwardly opening U **196**. The inner leg **197** of the U is of sufficient length to extend up through the track between the facing flanges. Thereafter the metal is bent transversely outward as at **198** and then extends upwardly into a downward facing U **200** vertically aligned over the rib **190**. A pair of drapery hanger ears **202** appropriately perforated **204** for the reception of drapery hooks extend downwardly from the outer edge of the plate in line with the adjoining side of the U over the front face **188** of the channel. A pair of rollers **206**, desirably of nylon or the like, are journaled on shafts **208** extending between the sides of the upwardly facing U **196** and bear upwardly against the lower edge of the downturned lip **192** of the back flange **186**. Similarly, a pair of rollers **210** are journaled on pins **212** extending between the side of the upper, downwardly facing U **200** to bear downwardly on the rib **190**. Otherwise, these trolleys may be the same in all respects as the trolleys illustrated in FIGS. 2 and 3. These trolleys provide a rolling contact with the appropriate channel surface rather than a sliding contact, but they stand a little higher above the level of the channel and to this extent are a little more difficult to conceal neatly.

For the followers, of course, the units may be substantially as illustrated in FIG. 23 only with closer spaced rollers or the follower may consist only of that section of the trolley as indicated by the line **210—210** looking in the direction of the arrows. Such a follower does not have great inherent stability in itself, but the loading of the pendant drapery will suffice to maintain its proper vertical orientation. This last described trolley or follower structure is not as proof against jamming and traversing corners, etc. as the first described form.

From the foregoing description it will be appreciated that a traverse rod system of novel function and design, and capable of versatile and yet smooth and certain operation, has been described here.

What is claimed is:

1. A traverse rod assembly for draperies which com-

prises a channel member adapted to be mounted to a wall, said member including a front wall, a bottom, and a back wall, and a horizontal flange associated with each wall facing and spaced from each other to define a track, and a drapery transport member comprising a block closely contained between the said flanges and having a horizontal rib overlying said back flange, said transport member including a portion thereof extending laterally from said block over said front wall and adapted for the attachment of a drape thereto to support said drape outside the vertical projection of said channel, said portion bearing against an area of the top of said front flange adjacent said front wall and spaced from the free edge thereof, said transport member deriving primary support from said back wall flange and said bearing on said area.

2. The combination as set forth in claim 1 wherein said rib comprises the lower defining member of a groove in said block.

3. The combination as set forth in claim 1 wherein said bearing area is over the top edge of the front wall of said channel member.

4. The combination as set forth in claim 3 wherein said block includes a groove loosely embracing the free edge of said front wall flange.

5. The combination as set forth in claim 1 wherein said transport member is a trolley comprising a strip having a block mounted to the underside at each end thereof, said blocks having ribs engaging the underside of said back wall flange, and said strip has a portion extending laterally over said front wall and bearing against said front wall flange at a point adjacent said front wall and spaced from the free edge thereof, said trolley including means for attaching a cord thereto to move said trolley along said track.

6. The combination set set forth in claim 5 wherein said ribs comprise the lower defining members of circumferential grooves about said blocks.

7. A traverse rod assembly for draperies which comprises a channel member adapted to be mounted to a wall, said member including a front wall, a bottom, and a back wall and a horizontal flange associated with each wall facing and spaced from each other to define a track, and a drapery transport member comprising a member supporting one vertical roller within said channel with the top edge exposed and bearing against the under side of the back wall flange and extending through said track to support another vertical roller with the bottom edge exposed and bearing against the top edge of said front wall exteriorly of said channel.

8. A traverse rod assembly for moving a pair of drapes to cover a window opening and optionally to open said drapes to the center or to the sides of said opening comprising a traverse rod having a track therein, four trolleys ararnged linearly in said track adapted for attachment to the top corners of each of said drapes, a pair of cords each having a loop extending from one end of said rod over a pulley at the other end thereof, the outer most trolleys being secured to opposite sides of one of said loops and the central trolleys being secured to opposite sides of the other of said loops.

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16—87.4, 87.6, 93; 160—126

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,430,678 March 4, 1969

Robert S. Steck et al.

It is certified that error appears in the above identified patent and that said Letters Patent are hereby corrected as shown below:

Column 4, line 67, "well" should read -- will --. Column 5, line 40, "FIG. 12" should read -- FIG. 11 --. Column 6, line 65, "consists" should read -- consist --. Column 7, line 31, "member" should read -- members --. Column 9, line 7, "overlying" should read -- underlying --.

Signed and sealed this 7th day of April 1970.

(SEAL)
Attest:

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Commissioner of Patents