July 4, 1933. G. W. DOVER ET AL 1,916,719

DRAPERY SUSPENSION DEVICE FOR CURTAINS

Filed Oct. 22, 1931 2 Sheets-Sheet 1

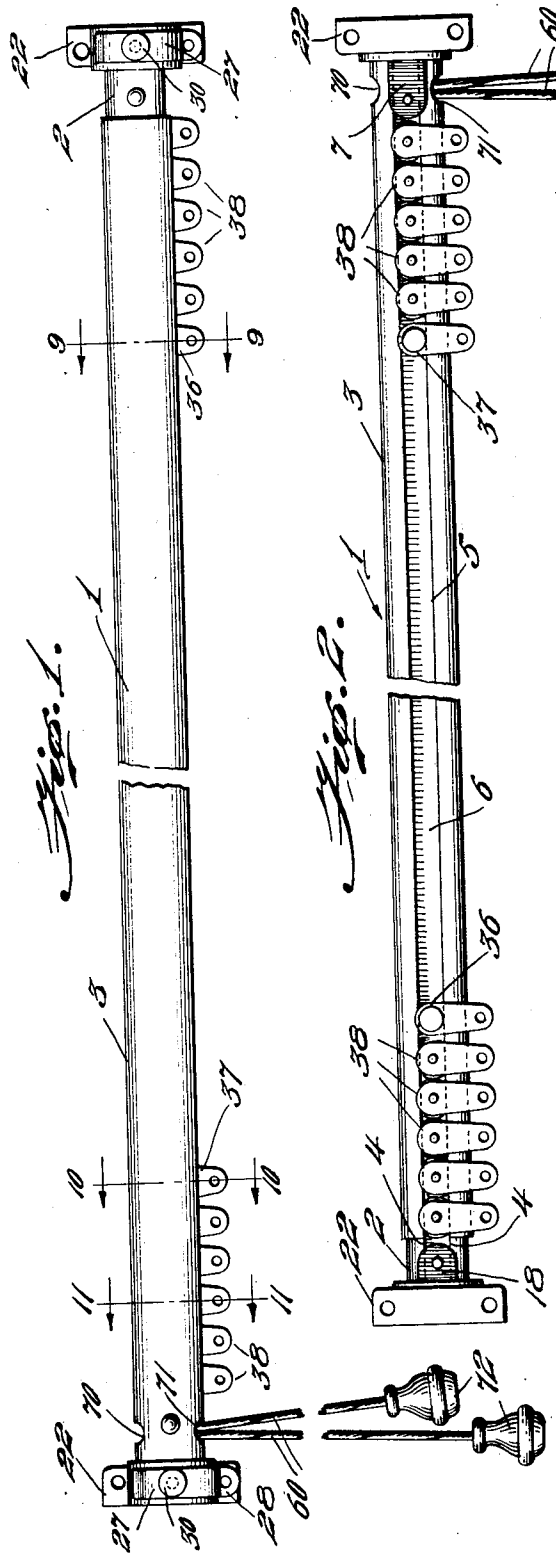


Fig. 1.

Fig. 2.

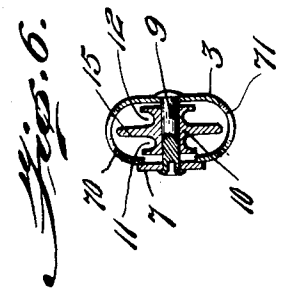


Fig. 6.

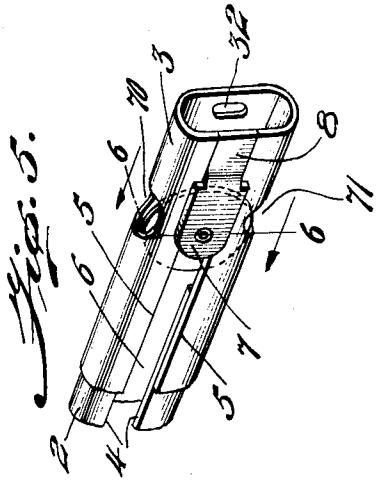


Fig. 5.

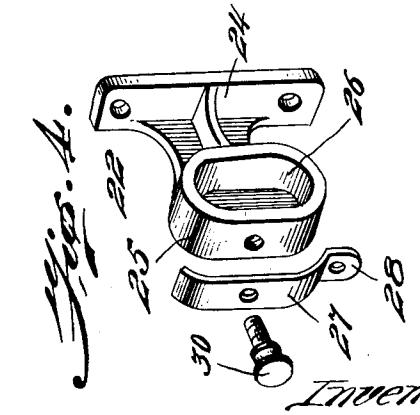


Fig. 4.

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DRAPERY SUSPENSION DEVICE FOR CURTAINS

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Fig. 5.

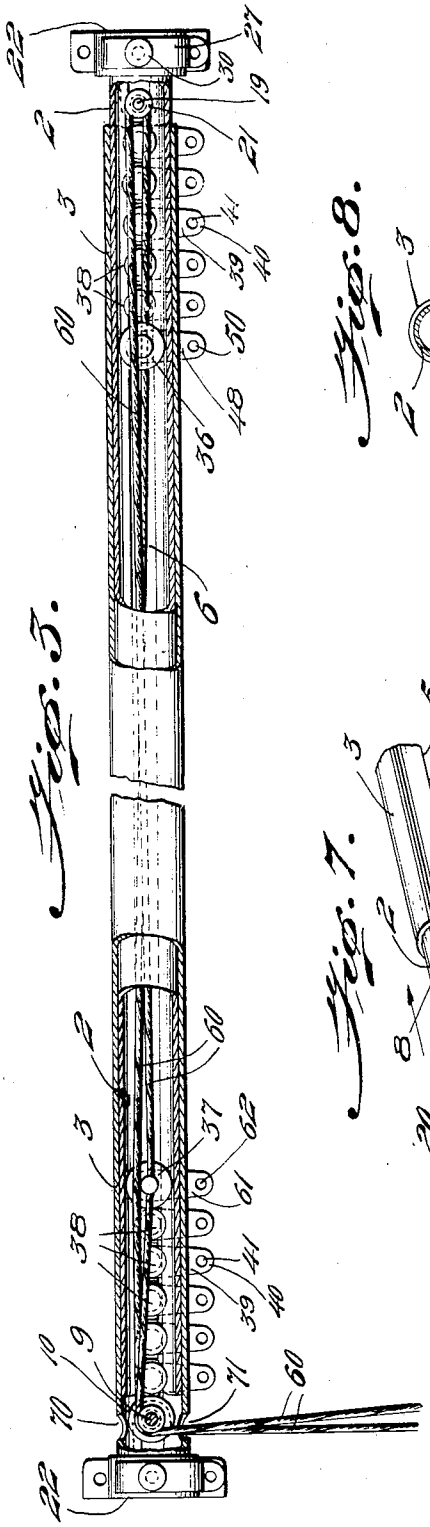


Fig. 8.

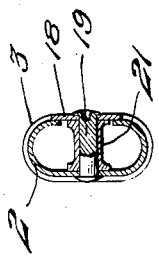


Fig. 7.

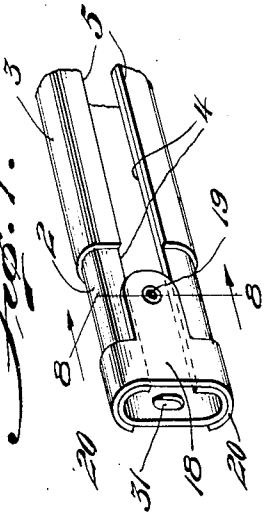


Fig. 12.

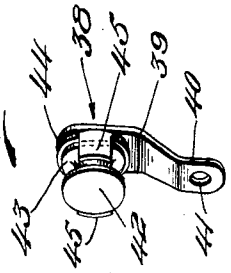


Fig. 11.

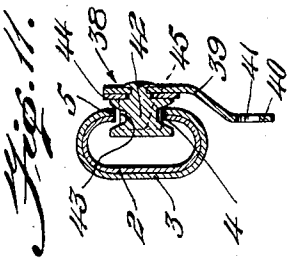


Fig. 10.

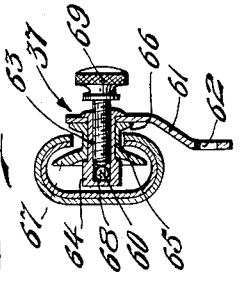
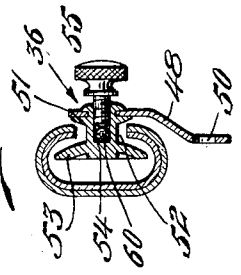


Fig. 9.



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Patented July 4, 1933 1,916,719

UNITED STATES PATENT OFFICE

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DRAPERY SUSPENSION DEVICE FOR CURTAINS

Application filed October 22, 1931. Serial No. 570,416.

This invention relates to a drapery suspension device for curtains, and more particularly to that type of suspension device which is provided with a plurality of movable carriers adapted to support the curtain and be operated by pull strings or similar devices to position the curtain as desired relative to the center of the window.

One object of the present invention is to provide a device of this character which comprises a pair of separate bracket members for supporting telescoping channel shaped carrier supporting rods in either of two positions so as to permit such arrangement of the rods as will make it possible to control the operation of the curtain from either side of the window without change in the carrier operating mechanism.

Another object of the invention is the provision of a device of this character comprising a pair of separate bracket members and a longitudinally adjustable curtain supporting assemblage unit adapted for removable connection therewith to position the curtain supporting unit in spaced relation with the window frame and permit the operation of the curtain from either side thereof.

Another object of the invention is to provide a longitudinally adjustable curtain supporting assemblage unit comprising a pair of telescoping sections containing carrier members and operating means therefor adapted for application without change to windows of varying widths.

Another object of the invention is the provision of a curtain supporting member of the character described having its opposed longitudinal edges spaced from each other vertically to provide a substantially continuous slot, and movable carrier members each provided with a grooved traveler block adapted to be positioned between the opposed longitudinal edges of the curtain supporting member to be supported and guided thereby in their movements longitudinally of the curtain supporting member.

Another object of the invention is to provide an improved operating mechanism for operating the carrier members in such a manner as to insure positive and unobstructed operation thereof at all times.

A further object of the invention is the provision of an improved type of carrier member provided with a traveler block so positioned as to travel upon one inturned edge of the channel shaped telescoping sections and having a guard member for maintaining the carriers in proper position relative to each other and thus permitting each carrier member to move freely at all times.

Another object of the invention is the provision of an improved pulley member provided with a double sheave and having an enlarged fin portion adapted to extend substantially across the larger transverse diameter of one of the telescoping sections whereby the operating cords are positively maintained in proper operating position and thus prevented from becoming entangled with each other or with other moving parts.

A further object of the invention is the provision of improved master carrier members provided with means for insuring free movement of the carrier members and for retaining them in position within the telescoping sections so as to provide space for the operating cord and maintain the cord in proper operative position within the telescoping sections.

Another object of the invention is the provision of filler members adapted to be secured to the outer ends of the telescoping sections and serving as closures for the longitudinal slots as well as co-operating with the main portion of each section to support a sleeve or pulley for guiding the cords operating the curtain carrier members.

A further object of the invention is the provision of curtain supporting anchor plates carried by the bracket members for anchoring the outer edges of the curtain sections so that they will be located in substantial vertical alignment with the bracket members.

Other objects and advantages of the invention relate to various improved details of construction and novel arrangements of the parts as will be more fully set forth in the detailed description to follow.

Referring to the drawings:—

Fig. 1 is a front elevational view of the curtain suspension device, showing the same in position as applied to the frame of a window and having the curtain supporting unit so mounted in the bracket members as to permit the operation of the curtain from the left hand side of the figure, as shown,

Fig. 2 is a rear elevational view of the structure shown in Fig. 1, the central portion of the curtain supporting unit being broken away,

Fig. 3 is a front elevational view of the curtain suspension device, partially in section, showing the telescoping arrangement of the channeled sections and the arrangement of the operating cords together with their relation to the curtain carriers which are actuated thereby in positioning the curtains relative to the window,

Fig. 4 is a disassembled perspective view of one of the bracket members, the curtain anchoring plate carried thereby and the locking screw employed for securing the end of the telescoping section in the recess formed in one side of the bracket,

Fig. 5 is a detailed perspective view of the end portion of the right hand telescoping section, seen in Fig. 2, illustrating the filler member for closing the end of the slot and the position of the guide pulley relative thereto,

Fig. 6 is a vertical transverse sectional view of the telescoping section shown in Fig. 5, taken along the line 6—6 of that figure,

Fig. 7 is a similar perspective view of the outer end of the other telescoping section, showing the position of the filler member relative thereto,

Fig. 8 is a vertical transverse sectional view through the telescoping section shown in Fig. 7, taken substantially along the line 8—8 of that figure,

Fig. 9 is a vertical transverse sectional view taken substantially along the line 9—9 of Fig. 1,

Fig. 10 is a vertical transverse sectional view taken substantially along the line 10—10 of Fig. 1,

Fig. 11 is a vertical transverse sectional view taken substantially along the line 11—11 of Fig. 1, and,

Fig. 12 is a perspective view of one of the intermediate curtain carrier members showing the position of the guard member relative to the traveler portion of the carrier.

In the embodiment of the invention illustrated herewith 1 designates a curtain supporting member which comprises a pair of hollow channel shaped telescoping sections 2 and 3, the section 2 being of slightly less cross sectional area than the section 3 whereby it is enabled to slide readily therein and thus form an extensible supporting member for supporting and housing the necessary mechanism for actuating curtain carriers to adjustably support curtains for windows and the like.

The curtain supporting sections 2 and 3 are of similar construction and are each formed of channel shaped cross section, having their longitudinal edges 4 and 5 inbent towards each other in such a manner as to be oppositely positioned to each other in a substantially vertical plane when in operative position, and to provide a substantially continuous longitudinal slot 6 extending throughout the major portion of the curtain supporting member. A filler plate 7 is secured to that end portion of the telescoping section 3 which is located at the left as seen in Fig. 1, and the filler plate 7 has a portion 8 offset slightly from the main body portion thereof to lie within the end of the slot 6. A pin 9 is passed through the end portion of the telescoping section 3 and the filler plate 7, and serves to hold the filler plate firmly secured to the end of the telescoping section and at the same time rotatably support a pulley 10 mounted within the channel formed in the telescoping section. The pulley 10 is provided with a pair of oppositely positioned surface grooves 11 and 12 for a purpose which will be more fully described hereinafter, and has a fin 15 located intermediate the grooves 11 and 12, the fin being of sufficient diameter to extend substantially entirely across the major axis of the channel.

The outer end of the telescoping section 2 is provided with a filler plate 18 secured thereto by means of a pin 19, the filler plate 18 being provided with branched ends 20 shaped to fit partially about the outer surface of the telescoping section 2 whereby the outer ends of the telescoping sections 2 and 3 are all substantially the same size to fit snugly within the lateral recess formed in a common bracket member. The pin 19 has a sleeve or pulley 21 mounted thereon to receive the operating cords for controlling the movement of curtain carriers.

Bracket members 22 of a similar character are provided for supporting the outer ends of the telescoping sections 2 and 3, each bracket member being provided with a base 24 for attachment to a portion of a window frame and having an outwardly projecting support 25 provided upon one side with a lateral recess 26 shaped to receive the outer end portion of one of the telescoping sections. A curtain supporting anchor plate 27 is provided with a depending portion 28 for attachment to the edge of a curtain and is secured to the projecting support 25 by means of a screw threaded holder 30, whereby the outer edge of each curtain may be fixedly anchored at a point adjacent to and in substantially vertical alignment with each bracket member, and thus the outer edge of the curtain may be securely held at all times

in its appropriate position relative to the edge of the window frame. The outer end of the telescoping section 2 is provided with an opening 31, and the outer end of the telescoping section 3 is provided with a similar opening 32. When the end of one of the telescoping sections is positioned within the recess 26 formed in the support 25 the application of the fastening screw 30 to the support not only holds the curtain supporting plate 27 in position upon the bracket but the end of the fastening screw 30 enters the opening 31 or 32 and thus serves to firmly secure the outer end of one of the telescoping sections to the bracket member.

Positioned within the channel in the curtain supporting member are a plurality of curtain carriers comprising master carriers 36 and 37, and intermediate carriers 38. The intermediate carriers 38 each comprise a curtain supporting plate 39 having a depending portion 40 provided with an opening 41 whereby the same may be attached to a portion of a curtain. An offset grooved or channeled traveler block 42 is secured to the main portion of the supporting plate 39 in any suitable manner as by being riveted or otherwise firmly attached thereto, and the traveler block 42 is provided with a circumferential groove 43 adapted to receive the inbent edges 4 and 5 of the telescoping section whereby the traveler block will ride upon the lowermost inturned edges and be guided by the uppermost inturned edges as it is retained in position within the slot 6 by the opposed inturned edges of the supporting member. A guard plate 44 is pivotally mounted upon a portion of the traveler block 42 and located adjacent to the plate 39, which guard plate is provided with oppositely positioned inturned wings 45, so proportioned as to extend substantially across the channel 6 and thus serve to maintain the adjacent carriers 38 in position of proper separation from each other and prevent them from becoming jammed.

The master carrier 36 is located inwardly of the intermediate carrier members 38 which are positioned at one end of the curtain supporting member, and is provided with a depending plate 48 provided with an opening 50 for attachment to the innermost edge of the curtain section located upon that side of the window. The master carrier 36 is provided with an offset traveler block 51 secured to the depending plate 48 in any suitable manner as by being riveted or otherwise secured thereto, and the traveler block 51 is provided with a circumferential groove 52 adapted to receive the inbent edges 4 and 5 of the telescoping sections 2 and 3 respectively. An enlarged guide plate 53 is formed integral with or secured to the traveler block 51 and positioned within the channel of the supporting member, the guide plate 53 having a diameter sufficient to extend substantially entirely across the major axis of the channel. A transverse opening 54 is formed in the traveler block 51 outwardly from the guide plate 53 to receive the cord 60 and a set screw 55 is threaded in the traveler block 51 and engages the cord 60 to bind the carrier member 36 firmly thereto.

The master carrier member 37 is located inwardly of the intermediate carrier members 38 upon the opposite end of the curtain supporting member from the master carrier 36, and is provided with a depending plate 61 having an opening 62 formed therein for attachment to the innermost edge of the curtain section located upon that side of the window. The master carrier 37 is provided with an offset spindle 63 having an enlarged head 64, and a traveler block or sheave 65 is mounted on the spindle 63 and offset from the depending plate 61. The traveler block 65 is provided with a circumferential groove 66 adapted to receive the inbent edges 4 and 5 of the telescoping sections 2 and 3 respectively. The traveler block 65 is provided with an enlarged guide plate 67 which is of sufficient diameter to extend substantially entirely across the major axis of the channel. A transverse opening 68 is formed in the enlarged head 64 of the spindle 63 to receive the cord 60, and a set screw 69 is inserted within the sleeve 63 to engage the cord 60 and bind it firmly to the spindle 63.

It will be noted that the cord 60 is connected to the spindle 63 inwardly of the guide plate 67, while in the master carrier 36 the cord 60 is secured to the traveler block 51 outwardly of the enlarged guide plate 53. This manner of positioning the cord serves to maintain the strands separate from each other during the operation of the mechanism and thus prevents the cords from becoming entangled with each other or with portions of the carriers.

The traveler block 65 employed in connection with the master carrier 37 is rotatably mounted upon the sleeve 63, but it may be non-rotatably secured to the sleeve or the depending plate 61, or the traveler blocks 42 and 52 may be rotatably mounted relative to their depending plates 39 and 48 respectively, if desired.

The telescoping section 3 is provided with oppositely positioned openings 70 and 71 located adjacent to the pulley 10 through which the ends of the cord 60 may extend to be positioned within easy reach of the operator for adjusting the curtains.

In assembling the parts to form the curtain supporting unit, which is located between and supported by the brackets 22 when in operative position, one end of the cord 60 is passed through the opening 70 or 71 in the telescoping section 3, dependent upon which side of the window it is desired that the cord

ends depend for operating the curtains. The cord end passed through the opening 70 or 71 is then passed over one of the grooves 11 or 12 formed in the pulley 10, in the present instance over the groove 11 as shown in Fig. 3 of the drawings. The desired number of intermediate carrier members 38 for attachment to one of the curtain sections are then inserted in the telescoping section 3, and the cord 60 is passed through the opening 68 in the spindle 63 of the master carrier 37, and the master carrier 37 likewise inserted in the telescoping section 3. The cord 60 is then passed into the open end of the telescoping section 2 and around the sleeve or pulley 21 carried by the pin 19, and the end then brought back towards the telescoping section 3. The desired number of intermediate carrier members 38 for application to the other curtain section are then inserted in the telescoping section 2, and the returning cord end passed through the opening 54 in the traveler block of a master carrier 36, the master carrier 36 being then placed in the telescoping section 2 inwardly of the intermediate carrier members as shown. The end of the cord 60 is then brought back into the interior of the telescoping section 3 and passed over one of the grooves in the pulley 10, in the present instance over the groove 12, and then out through the opening 70 or 71 with the other cord end. The inner ends of the telescoping sections 2 and 3 are then interfitted with each other and forced together until the complete overall length of the curtain supporting members is substantially equal to the distance between the brackets 22. The lower ends of the depending plates 39 upon each side of the supporting member are secured to one curtain section at substantially equal intervals and each master carrier 36 and 37 has its depending plate secured to the innermost edge of one of the curtain sections. The curtain sections may then be arranged in their extended positions before the window and the set screws 55 and 68 then threaded in against the cord 60 to properly locate the positions of the master carriers on the cord when the curtain sections are fully extended. The opposite ends of the curtain supporting member may then be inserted in the lateral recesses 26 of the brackets 22, the outer edges of the curtain section secured to the holding plates 27, and the screws 30 then inserted to bind the holding plate 27 and one end of the curtain supporting member 1 firmly in position within the recess 26 of the bracket member.

The parts being thus secured in position with the opposite ends of the cord 60 depending from one end of the curtain supporting member through the opening 70 or 71, a pull member or weight 72 may be attached to each end of the cord to facilitate the operation of the parts.

When the telescoping sections 2 and 3 have been interfitted together with the carrier members 36, 37 and 38 all in position within the slot 6 the structure thus formed constitutes what may be termed a curtain supporting unit, wherein all of the operating parts are retained in position for use at any time without change, merely upon the application of the unit to a pair of brackets. The telescoping character of the curtain supporting member renders the curtain supporting unit capable of application to windows of varying widths without any change in the structure itself and by merely lengthening or shortening the curtain supporting member by adjusting the telescoping sections towards or from each other.

The provision of the oppositely positioned openings 70 and 71 in the telescoping section 3 makes it possible to apply the curtain supporting unit to a window in such a manner that the ends of the operating cord may be actuated from either side of the window by merely reversing the curtain supporting unit end for end and threading the cords so that they will pass through either one or the other of the openings 70 and 71.

By means of the pulley 10 provided with the central fin 15 which extends substantially across the major transverse length of the channel and by constructing and arranging the guide members 53 and 57 so that the portions of the cord 60 to which they are attached are located substantially on opposite sides of the channel, those portions of the cord which lie within the channel are substantially separated from each other so that free movement of these portions of the cord is insured and the cord is prevented from becoming entangled with any of the operating parts during the operation of the mechanism.

The traveler blocks 42, 52 and 65 are all positioned within the slot 6 in such a manner that the inturned edges 4 and 5 of the telescoping sections 2 and 3 respectively project within the grooves formed in the traveler blocks whereby the several carrier members are all maintained in proper operative position at all times and easy operation of the curtains is secured by reason of the fact that these traveler blocks travel upon one of the inbent edges of the curtain supporting member while at the same time being guided and maintained in position at all times by the other of said inbent edges.

The provision of the anchor holding plates 27 carried by the brackets 22 insures that the outer edge of each curtain section be maintained at all times in proper position relative to the edge of the window and overcomes the tendency to form a gap between the curtain and window frame which would be present in the structure if the outer edge of the

curtain was secured to one of the movable carrier members 38.

The provision of the filler plates 7 and 18 with the portion 8 offset to fit within the slot 6 and the portion 20 fitting over the outer surface of the telescoping section 2 respectively, result in rendering the end portions of the telescoping sections 2 and 3 of substantially the same size externally so that they will fit closely within the recess in either bracket member and thus permits the ready interchange of the curtain supporting member end for end whenever it is desired to change the same to permit operation of the curtains from one side or the other of the window, and at the same time the provision of the filler members serve to close the ends of the slot 6 and retain the curtain carrier members against separation from the curtain supporting member.

What we claim is:—

1. A drapery suspension device for curtains comprising oppositely positioned bracket members, each provided with a lateral recess shaped to receive the end of a curtain supporting unit, a continuous straight curtain supporting unit comprising a pair of channel shaped telescoping sections and having a continuous longitudinal slot formed in one side thereof bordered by the opposed parallel inturned edges of said sections, curtain carrier members carried by said unit, closure members secured within the outer ends of said telescoping sections for closing the ends of the slots and holding the carrier members against separation from the unit when the sections are in telescoping relation with each other, and means for securing the outer end of each telescoping section in the recess formed in one of said oppositely positioned brackets.

2. A drapery suspension device for curtains, comprising oppositely positioned bracket members, each provided with a lateral recess shaped to receive the end of a curtain supporting unit, an extensible curtain supporting unit comprising a pair of telescoping hollow metal sections, each having its lateral edges spaced apart to provide a common longitudinal slot extending substantially throughout the effective length of said unit, curtain carrier members carried by said unit and mounted for movement in said slot, a filler member carried by each of said sections and serving as a closure for the slot at each end of said unit to hold the carrier members against separation from the unit, one end of each of said telescoping sections fitting within the recess formed in one of the opposed brackets, and means for securing the ends of said telescoping sections within the recesses formed in the said brackets.

3. A drapery suspension device for curtains comprising a curtain supporting member made up of hollow channel shaped telescoping sections, each of which has its longitudinal edges spaced from each other vertically to form a slot, the slots in said sections being in alignment to form a common slot extending substantially throughout the length of the supporting member, filler members carried by the outer end of each telescoping section to provide end closures for the slot in said supporting member, curtain carriers carried by said supporting member, cords carried by said supporting member for moving said carriers longitudinally of said supporting member, and guide pulleys carried by said filler members for guiding said cords.

4. In a drapery suspension device for curtains, a pair of hollow telescoping sections having the longitudinal edges thereof spaced from each other vertically to form a slot, a filler member secured to one end of each of said sections and serving as a closure for the slot, the filler member mounted upon the smaller of said telescoping sections having a portion overlying a part of the end thereof to increase the outer diameter of the end of said section.

5. In a drapery suspension device for curtains, a supporting member provided with vertically spaced portions forming a track, a curtain carrier member provided with a grooved traveler block adapted to engage said track, and a pivotally mounted guard member having offset wings fitting between the spaced portions of said supporting member.

6. In a drapery suspension device for curtains, a curtain supporting member, a bracket adapted to receive the end of said curtain supporting member, and a curtain supporting plate carried by said bracket for supporting one edge of the curtain in substantial vertical alignment with said bracket.

7. A drapery suspension device for curtains comprising an extensible curtain supporting unit made up of telescoping channeled sections, curtain carrier members and operating means therefor having portions located within the channels of said telescoping sections, and means secured within the outer end of each telescoping section for retaining the curtain carrier members and operating means therefor within the channeled portion of said unit.

8. A drapery suspension device for curtains comprising oppositely positioned bracket members each provided with a lateral recess shaped to conform with the cross-sectional shape of a curtain supporting unit, an extensible curtain supporting unit made up of telescoping sections and having the opposite ends thereof fitting closely within the recesses of said bracket members to maintain the curtain supporting unit in curtain supporting position.

9. A drapery suspension device for curtains comprising an extensible curtain sup-

porting unit made up of telescoping channeled sections, curtain carrier members and operating means therefor comprising cords having portions located within the channeled portion of said unit, and means secured within the outer end of each telescoping section for retaining said curtain carrier members within the channel and at the same time serving as a guide for said cords.

10. In a drapery suspension device for curtains, tubular curtain supporting members provided with inturned edges spaced from each other to form a slot, curtain carrier members having portions located within the slot, a filler member secured to said curtain supporting member adjacent to one end thereof and having a portion extending into and serving as a closure for the slot, and a guide pulley carried by said curtain supporting member and said filler member and located within the tubular portion of said curtain supporting member.

11. In a drapery suspension device for curtains, tubular telescoping curtain supporting members each provided with inturned edges spaced from each other to form a continuous slot, curtain carrier members having portions located within the slots, filler members secured to each of said curtain supporting members adjacent the outer end thereof and each serving as a closure for the slot, and guide pulleys each carried by one of said curtain supporting members and its filler member, said guide pulleys being each located within the tubular portion of one of the tubular telescoping curtain supporting sections.

12. In a drapery suspension device for curtains, a two-part curtain supporting unit comprising a pair of mutually telescoping sections capable of longitudinal adjustment to fit windows of different widths and each provided with inturned edges spaced from each other to form a continuous slot, means for supporting said unit, curtain carrier members having portions located within said slot, and means secured within the outer end of each telescoping section for retaining said curtain carrier members within the slot when the curtain supporting unit is separated from its supporting means.

In testimony whereof we have affixed our signatures.

GEORGE W. DOVER.
DELMAR S. DOVER.