July 19, 1949. J. A. MINARCIK, JR 2,476,887

CURTAIN OR DRAPE ASSEMBLY

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FIG. 1.

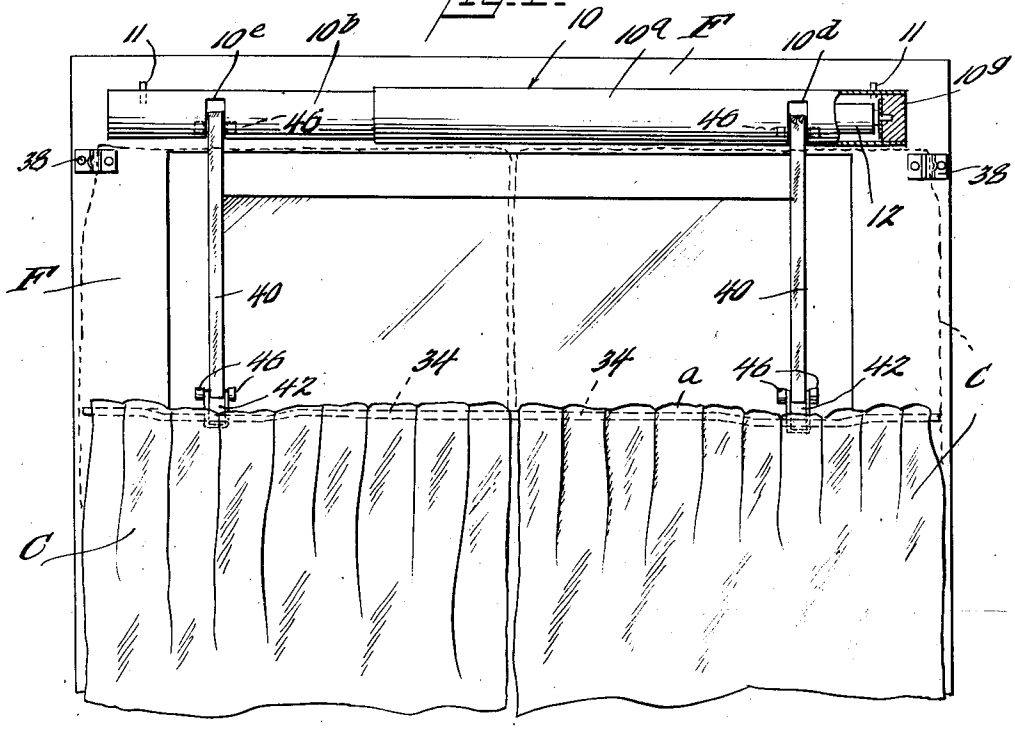


FIG. 2.

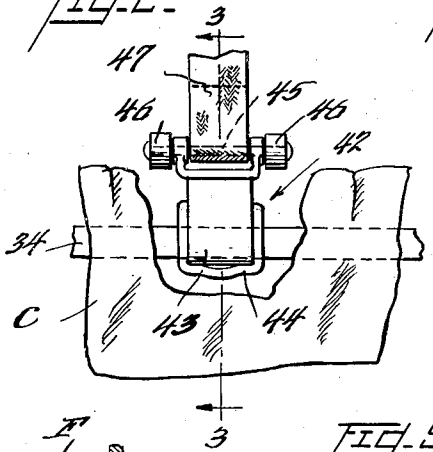


FIG. 4.

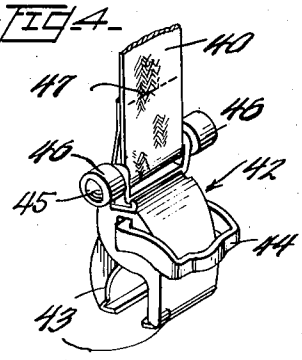


FIG. 3.

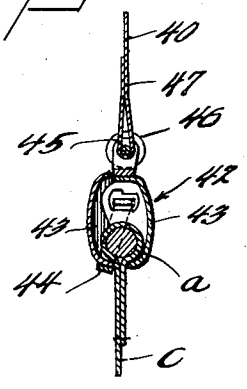
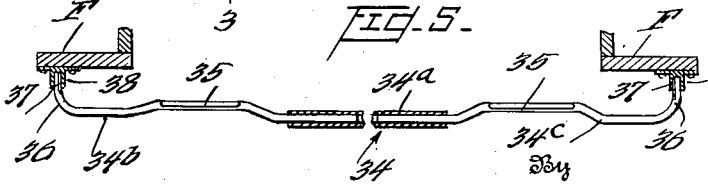


FIG. 5.

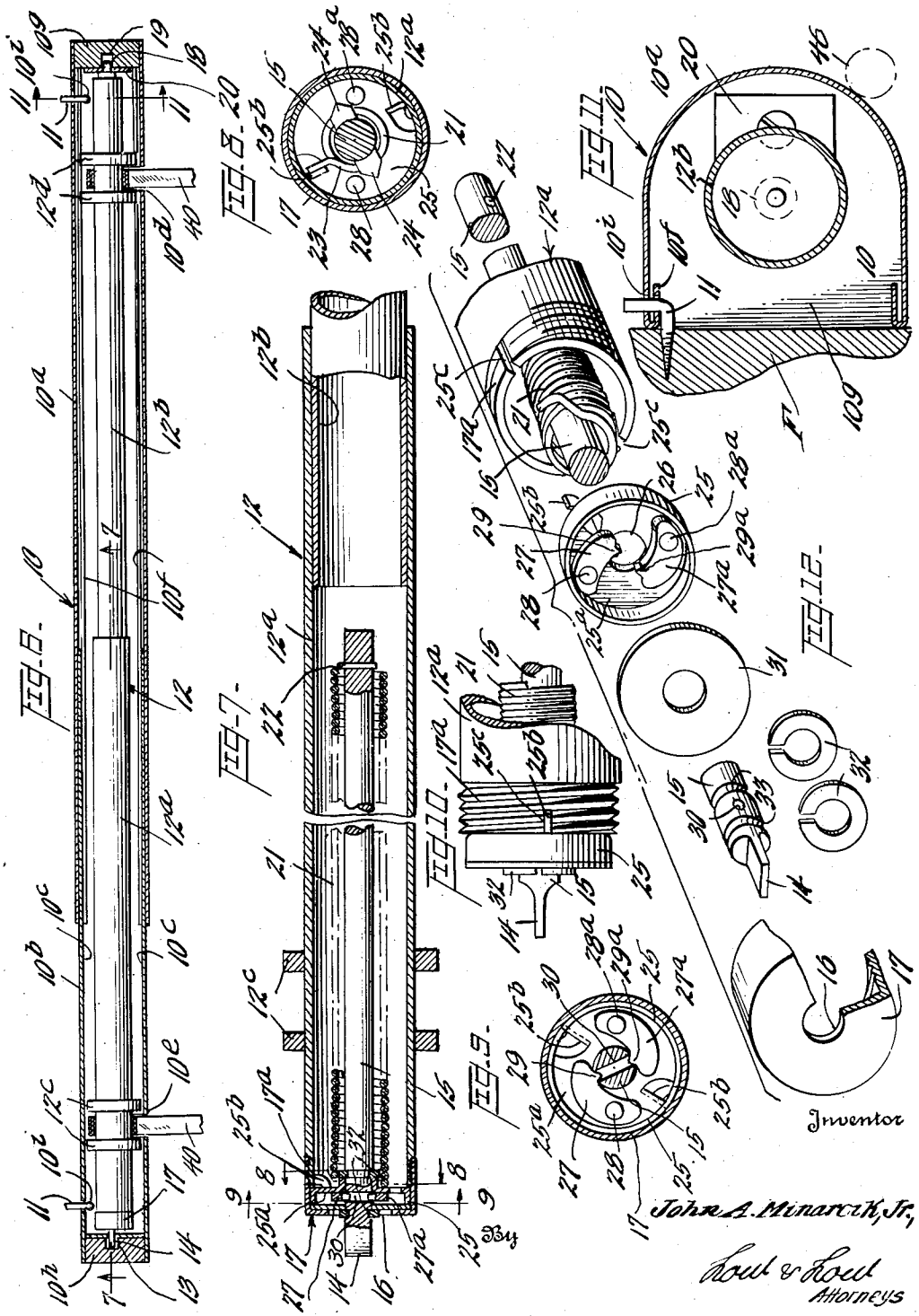


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July 19, 1949. J. A. MINARCIK, JR 2,476,887

CURTAIN OR DRAPE ASSEMBLY

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CURTAIN OR DRAPE ASSEMBLY

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Application January 12, 1948, Serial No. 1,789

5 Claims. (Cl. 211—103)

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The invention relates to adjustable curtain or shade supports of the character which may be readily and conveniently made accessible for changing or replacement purposes by the maid or housewife without necessitating climbing upon a chair or ladder with consequent exposure to fall and injury.

The invention has for its objects to simplify and improve the structure as well as providing desirable advantages and economies therein.

A principal object of the invention is to provide a curtain or shade support comprising a fixed rotatable roller and housing therefor and a relatively bodily movable curtain or shade holding rod, all of which interconnected parts are capable of convenient longitudinal conforming adjustment so as to adapt the assembly for window or door frames of varying sizes or widths, thereby providing universal application of the assembly to any window or door opening in the home where varied curtain or drapery decorations are desired.

Another object of the invention is to obviate the necessity of providing separate fixed sizes of curtain or shade support assemblies for corresponding window or door frames of different and varying widths.

A further object is to provide a curtain support assembly of the character described which may be economically manufactured and which is composed of relatively few cooperating parts designed for convenient installation in the home with a minimum of effort.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

In said drawings:

Fig. 1 is a view in front elevation of the improved curtain hanger assembly shown in lowered position for adjustment or replacement purposes, relative to a window or door frame opening, the normal raised position of the assembly being indicated by dotted lines.

Fig. 2 is an enlarged detail view in front elevation, partly broken away, of the releasable curtain and rod attaching means.

Fig. 3 is a vertical section on line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the attaching member or clip illustrated in Figs. 2 and 3.

Fig. 5 is a plan view of the curtain rod or supporting unit.

Fig. 6 is an enlarged view in vertical section of

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the casing or housing for the curtain and tape supporting roller shown enclosed therein.

Fig. 7 is a further enlarged longitudinal sectional view through a portion of the roller, taken on line 7—7 of Fig. 6.

Fig. 8 is a still further enlarged transverse section on line 8—8 of Fig. 7.

Fig. 9 is a similar view on line 9—9 of Fig. 7.

Fig. 10 is an enlarged detail view in front elevation of one end of one of the roller members shown at the left in Fig. 6 with a portion removed.

Fig. 11 is an enlarged transverse section on line 11—11 of Fig. 6, and

Fig. 12 is an exploded view of the spring tension and clutch controlling means for the roller section illustrated in Fig. 7.

In said drawings the casing or housing 10 for the spring roller assembly is designed to be mounted in fixed adjusted position over the door or window frame F and includes two complementary elongated channel or cup shaped members 10*a* and 10*b* of substantial U-shape in cross section and which may be constructed of sheet metal or plastic material. The casing member 10*a* of slightly larger cross sectional dimension, is provided at its open or rear end with reversely turned integral flange portions 10*f* spaced slightly inwardly from the outer casing wall (Fig. 11) so as to provide interposed recesses or channels for sliding or telescoping engagement with the oppositely disposed non-flanged wall extremities 10*c* of the complementary casing or housing member 10*b*. Casing member or section 10*a* is provided adjacent one end with a vertically elongated clearance slot 10*d* on its forward curved wall, and the remaining complementary casing section 10*b* is similarly slotted adjacent its outer end as at 10*e* for a purpose to be described. The casing members or sections 10*a* and 10*b* are respectively closed at their outer ends by rigid filler blocks or end wall members 10*g* and 10*h*.

For the purpose of suitably mounting the casing at the top of the door or window frame F, each housing member may be suitably apertured as at 10*i* for the reception therethrough of the outer ends of hook elements 11 which may be driven or screwed into the frame above the window or door opening. When the casing members or sections 10*a* and 10*b* are assembled as described in telescoping relation, it will be noted that the same may be longitudinally and relatively adjusted manually by reason of their interlocked sliding engagement, so as to fit or com-

pensate for a frame opening of any desired or given width. After such adjustment the casing member and its enclosed roller assembly may be secured in fixed position as described relative to the frame and window or door opening.

The spring roller member 12 of the assembly is also of the two part telescoping type so as to permit the same to be longitudinally adjustable to conform to a prescribed adjusted length of the casing members 10*a* and 10*b*, and may be constructed of wood or any desired suitable material. For this purpose the roller includes an outer substantially cylindrical member 12*a* and an inner cylindrical member 12*b* of corresponding less diameter and having a frictional sliding fit within the roller element 12*a* as best seen in Figs. 6 and 7. Spaced rigid cylindrical guide members 12*c* and 12*d* for the flexible curtain supporting members are provided respectively on the roller elements 12*a*, 12*b* adjacent their outer ends to the end that when the casing and roller are assembled (Fig. 6) the said guide elements may be respectively aligned in registry with opposite sides of the casing slots 10*d*, 10*e*.

For the purpose of mounting the assembled longitudinally adjustable roller within the casing or housing 10, one filler block 10*h* of the latter is provided with a central elongated recess 13 for the non-rotatatiive reception therein of the flattened end 14 of a rod element 15 longitudinally and centrally housed within the roller section 12*a* and which projects at its outer end through a central aperture 16 in a screw or closure cap 17 threadedly secured as at 17*a* on the outer end of said roller section 12*a*. The corresponding outer end of the roller section 12*b* is provided with a cylindrical trunnion 18 rotatably journaled within a central recess 19 in the end filler block 10*g* of the casing member 10*a*, a fixed washer or anti-friction bearing plate 20 being interposed if desired between the adjacent end of the roller section 12*b* and the end block 10*g*.

The spring tension means for the roller comprises a coiled torsion spring 21 surrounding the non-rotatable rod 15 and having its inner end projected through or otherwise rigidly secured as at 22 to the inner end of the rod. The opposite or outer end 23 of the spring is clamped between opposed lug members 24 (Fig. 8) and secured at its extremity to a projecting lug member 25*b*, each of such lugs being integrally formed on a cup-shaped element 25 suitably housed within the screw cap 17 fixed on the roller section 12*a* for rotation therewith, and constituting a part of a spring tensioned friction clutch device.

The end wall 25*a* of the cup member 25 is provided with diametrically opposed radially projecting integral lugs 25*b* rigidly engaged with the recesses 25*c* (Fig. 12) in the inner cylindrical wall of the roller section 12*a* to insure against relative rotation between the cup member and roller and constituting a fixed connection.

Said rotatable cup element 25 is centrally apertured as at 26 for the reception therethrough of the rod 15 and is provided on its inner end wall with a pair of opposed pawl members 27, 27*a* pivotally mounted at 28, 28*a* on the cup end wall. The outer free ends of said pawl elements are provided with opposed projections 29, 29*a* for respectively engaging within opposite ends of a transverse aperture 30 in the fixed or non-rotatable rod member 15 (Fig. 9). A centrally apertured washer element 31 is removably

disposed adjacent the outer open end of the cap element 25 of the clutch for the purpose of housing the pawl members when the cap is rotatably inserted within the end closure screw cap 17 of the roller section 12*a*. A pair of longitudinally spaced split lock washers 32 are designed to seat within spaced circumferential grooves 33 on the rod 15 respectively on opposite sides of the assembled cup and washer element 25 and 31, for the purpose of holding the parts in assembled relation.

The curtain or shade supporting rod is indicated at 34 (Fig. 5) and as in the instance of the roller 12 and casing 10, is longitudinally extensible for adjustment in conformity therewith. The rod unit comprises a central sleeve section 34*a* for slidably housing the inner ends of oppositely disposed rod elements 34*b* and 34*c*, each preferably provided with intermediate offset flattened portions 35 and angularly disposed inwardly extending end portions 36 having spring clips 37 thereon. Said clip portions are not essential to the invention but are designed for removable insertion if desired within suitably apertured bracket elements 38 (Fig. 1) fixed to the frame F adjacent and beneath the casing and roller assembly, for the purpose of holding the curtain rod and its supported draperies against swinging movement.

The curtain, shade or desired drapery member or members are indicated at C in Fig. 1 and may be provided at the upper margins with the usual hemmed or loop portion *a* for the loose reception therethrough of the rod and sleeve sections, after which the inwardly extended end portions 36 of the rod members if desired may be inserted in the clips 38 as is customary for hanging the curtains in fixed relation to the window frame.

A pair of flexible tape elements 40 are fixed at their upper ends to the roller sections 12*a* and 12*b* respectively between the spaced cylindrical guide members 12*c*, 12*d* thereon for winding engagement therebetween upon the roller when the curtain rod 34 is elevated and lowered as a result of opposite spring tensioned and frictional rotation of both roller sections 12*a*, 12*b* relative to the casing 10. The free ends of the tape members extend through the casing slots 10*d* and 10*e* and are provided at their lower or free ends with curtain engaging clip members generally designated at 42. Each clip member includes a pair of complementary opposed jaw elements 43 loosely pivotally secured together upon a clamping loop element 44. One of the jaw members 43 through which the loop element 44 loosely extends, is pivotally secured at its upper end to a pintle rod 45 and is further provided with a pair of oppositely disposed anti-friction rollers 46 loosely journaled thereon. The lower end of each flexible tape 40 extends around the pintle 45 and is hemmed or secured upon itself as indicated at 47. The flattened portions 35 of the curtain rod sections 34*b*, 34*c* are respectively engaged between the jaw portions 43 of the clips 42 and are releasably secured to the rod and to adjacent portions of the assembled curtain members C, when the clamping rod element 44 is swung downwardly into jaw engaging positions as shown in Figs. 1, 2 and 3. From the foregoing it will be apparent that when it is desired to remove the curtains C from their normally elevated position shown in dotted lines in Fig. 1, it is merely necessary while standing on the floor, to grasp and pull downwardly upon the curtains if within reach, or

upon the curtain rod 34. This serves to rotate the roller 12 relative to the fixed spring supporting rod 15 and unwind the tapes 40 from the roller sections 12a and 12b against the tension of torsion spring 21, thereby storing energy in the latter. The arrangement is such that downward pull on the tapes 40 rotates the spring roller sections 12a, 12b and the fixed cup member 25 in one direction so that the pivoted pawl detents 29, 29a ride freely into and out of the aperture 30 of the non-rotating rod 15 fixed in the casing 10.

After being lowered to an accessible position, the described friction clutch and pawl elements serve to hold the spring tapes against reverse winding movement under the urge of the spring, as in the instance of the usual shade roller. Such reverse rotation is prevented by gentle engagement of one or both of the pawl detents with the rod aperture 30, as will be apparent from Fig. 9. The thus lowered curtains or drapes C to a desired easily accessible position as shown in Fig. 1, may then be removed for cleaning and replaced by clean curtains or the like upon the curtain rod by first releasing and again attaching the clips 42 from the rod 34 as will be apparent. Thereafter the fresh or desired hanging drape assembly may be elevated by slightly drawing down upon the tapes to release the pawls from the rod aperture 30 thus permitting the stored tension of the spring 21 to elevate the tapes and curtain rod through reverse rotation of the roller 12 into elevated position adjacent the casing 10 as shown in dotted lines in Fig. 1.

During such reverse rotation of the roller under the urge of the spring, the pawls ride loosely over the opposite ends of the rod aperture 30 due to the relatively rapid return rotation of the roller 12.

In elevated position the anti-friction rollers 46 which may be covered with soft rubber if desired, engage on opposite sides of the casing apertures 10d, 10e to properly position the curtain assembly in elevated position and to insure against any tendency of the tapes 40 to be unduly retracted into the casing apertures under spring tension with consequent possibility of jamming or wedging of the clip members 42 therein.

It will be apparent from the foregoing that the described structure while broadly old for the purpose, is in a unitary economical assembly, which may be conveniently operated for the quick replacement of curtains, shades or drapes upon desired window or door frame of varying sizes or widths. Furthermore the described structure is such as to effectually protect the parts against dust accumulations and is capable of extreme ease of operations by the housewife without undue effort or any danger of physical injury in replacing or installing the desired draperies.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

What is claimed is:

1. An adjustable curtain support comprising an elongated casing composed of a plurality of connected telescoping members of substantial U-shape in cross section, opposed wall portions at the open side of one of said casing members having a slidable mounting within spaced channels defined by flanged wall portions at the open side of an adjacent casing member, a multiple part longitudinally extensible roller journaled at its opposite ends in said casing, a plurality of flexible connecting members respectively secured at one end thereof to spaced portions of said extensible roller, and a longitudinally extensible multiple part support rod secured at spaced portions thereof to the opposite ends of said flexible connecting members, whereby said casing members may be longitudinally adjusted to fit a window or door frame of a given width, and said roller and support rod may be correspondingly longitudinally adjusted to conform to the adjusted length of said casing.

2. An adjustable curtain support comprising an elongated casing composed of a pair of apertured, connected telescoping sections having end walls, a pair of spring tensioned telescoping roller sections journaled at their outer ends in the end walls of said casing sections, a pair of flexible connecting members respectively secured at one end thereof to spaced portions of said roller and extending through the casing apertures for winding engagement with said roller sections, and a longitudinally extensible curtain support rod including connected telescoping sections respectively removably secured to the opposite ends of said flexible connecting members, whereby said casing sections may be longitudinally adjusted to fit a window or door frame of a given width and said roller and curtain support rod may be correspondingly longitudinally adjusted to conform to the adjusted length of said casing.

3. An adjustable curtain support comprising an elongated casing composed of a plurality of connected telescoping sections of U-shape in cross section, opposite side walls of one of said sections terminating in reversely bent spaced flanges forming elongated recesses for the sliding reception therein of the straight non-flanged opposite side walls of the other casing section, a multiple part spring tensioned telescoping roller rotatably mounted at its opposite ends in said casing sections, a plurality of flexible tapes respectively secured at one end between spaced guide flanges on said roller for winding engagement therewith, said tapes extending through apertures respectively formed in said casing sections, and a longitudinally extensible curtain support rod composed of connected telescoping members attached at spaced portions thereof to the opposite ends of said tapes, whereby said casing sections may be longitudinally adjusted while held against transverse displacement to span window or door frame openings of varying widths and said roller and support rod may be correspondingly longitudinally adjusted to conform to the adjusted length of said casing.

4. An adjustable curtain support comprising an elongated casing composed of a plurality of connected telescoping channel shaped sections, each of said sections having an aperture in the closed front wall thereof, a multiple part roller journaled at its opposite ends in said casing, said roller being composed of two connected telescoping cylindrical sections one of which is mounted for spring tensioned rotation relative to said casing, a plurality of flexible connecting tapes respectively secured at one end to spaced guide members on said roller for winding engagement thereon and extending through said casing apertures, and a longitudinally extensible curtain support rod composed of a plurality of connected

telescoping members releasably attached at spaced portions thereof to the opposite ends of said flexible connecting members, said attachment including clamping means on the outer end of each of said tapes, said curtain support rod being vertically adjustable as a unit with said tapes relative to said casing, said casing sections being longitudinally adjustable to span window and door openings of varying widths and said roller and curtain support rod being correspondingly longitudinally adjustable to conform to the adjusted length of said casing.

5. An adjustable curtain support comprising an elongated casing composed of a pair of slidably interlocked telescoping sections of U-shape in cross section having spaced apertures therein, a two-part spring tensioned roller formed of telescoping sections journaled at its opposite ends in said casing sections, a pair of flexible tape members respectively secured at one end to spaced portions of said roller adjacent the opposite ends thereof and extending through said casing apertures, a longitudinally extensible multiple part curtain support rod for attachment at spaced portions thereof to the opposite ends of said flexible tape members, and a pair of releasable clamping members connected to said rod and to the outer ends of said tape members, whereby said casing sections may be longitudinally adjusted to span window and door openings of various sizes and said roller and curtain support rod may be correspondingly longitudinally adjusted to conform to the adjusted length of said casing.

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