E. E. WHITMORE.

EXTENSIBLE CURTAIN ROLLER.

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1,068,030.

Patented July 22, 1913.

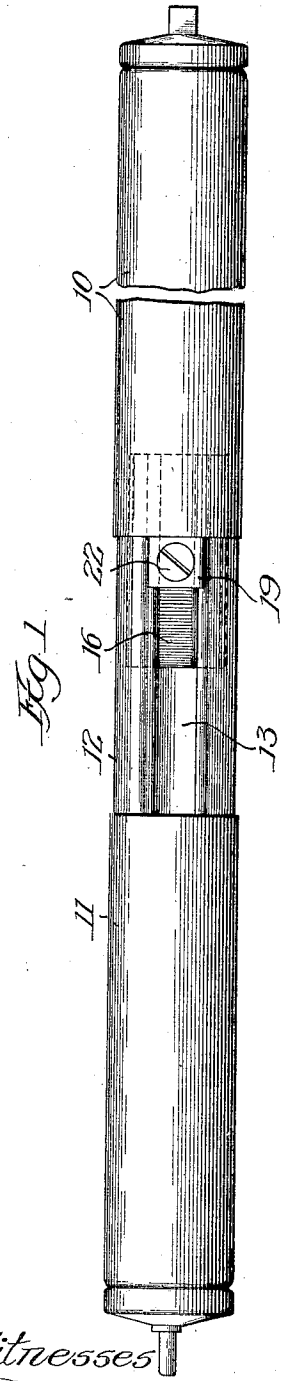


Fig. 1

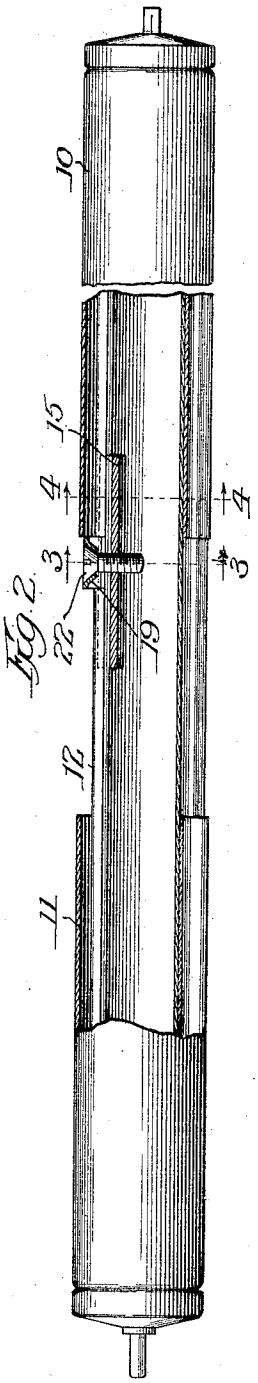


Fig. 2.

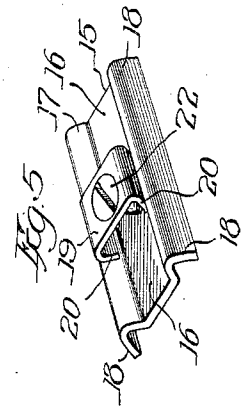


Fig. 5

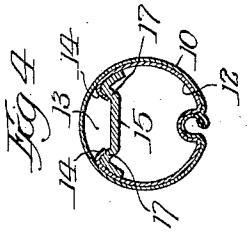


Fig. 4

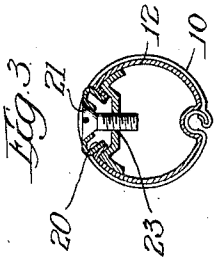


Fig. 3

Witnesses

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EXTENSIBLE CURTAIN-ROLLER.

1,068,030. Specification of Letters Patent. Patented July 22, 1913.

Application filed April 29, 1912. Serial No. 693,820.

To all whom it may concern:

Be it known that I, EDWARD E. WHITMORE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Extensible Curtain-Rollers, of which the following is a specification.

My invention pertains to extensible rollers for curtains, shades and the like and has for its primary object the provision of convenient and efficient means whereby the shortening movement of the parts is limited positively and the parts are securely locked together in adjusted position.

Having these objects in view I provide a stop adjustable on one of two telescopically arranged sections and adapted to serve as an abutment for the end of the other of said sections, said stop also acting when set to expand one of the sections into locking frictional engagement with the other section.

These and other novel features of my invention will be readily understood from the following detailed description based upon the accompanying illustrative drawing, wherein:—

Figure 1 is a broken view showing in side elevation a preferred embodiment of the invention. Fig. 2 is a similar view partly in longitudinal section. Fig. 3 is a transverse section on the line 3—3 of Fig. 2. Fig. 4 is a similar section on the line 4—4 of Fig. 2. Fig. 5 is a detail perspective of the stop and expanding members.

Referring to the drawing wherein similar reference numerals indicate corresponding parts throughout the several views 10 designates the main section of a shade or curtain roller which is provided with the usual interior winding spring and ratchet and pawl mechanism, not shown, while 11 designates the end section of the roller having the inner portion thereof reduced at 12 so as to slide telescopically within the section 10. The portion 12 may be formed integral with the portion 11 or fixed therein in any suitable manner.

The reduced portion 12 is of a length sufficient to allow of shortening and lengthening adjustment of the parts within a reasonable range and is provided throughout its length with a depressed longitudinal slot 13, the side walls 14, 14 of which converge downwardly as clearly indicated in Figs. 3 and 4.

Within the portion 12 of the end section 11 is disposed a plate 15 of conventional M shape having a flat central portion 16 of substantially the width of the slot 13 with upwardly diverging side portions 17, 17 adapted to fit beneath the downwardly converging sides 14 and also having downwardly diverging marginal portions 18, 18 adapted to fit against the inner walls of the portion 12. A stop 19 is disposed exterior to portion 12 within the slot 13, which stop has downwardly converging marginal portions 20, 20 adapted to bear against the upper faces of the sides 14 in parallel relation. This stop is provided with a central counter-sunk aperture 21 within which is seated the conical head of a machine screw 22 which has threaded engagement at 23 with the plate 15. The screw, stop and plate together constitute the limiting and expanding mechanism whereby the inward telescopic movement of the parts is positively limited and the parts themselves are frictionally locked together as will be explained.

To adjust the roller to a particular window the mechanism shown in Fig. 5 is mounted within the slotted portion 12 and positioned longitudinally thereof so that when the two sections are properly adjusted longitudinally the front face of the stop will bear against the end face of the main roller section. There being at this time no expanding action exerted by the stop and plate the parts are readily moved telescopically into the proper position. The screw 22 is then tightened, the plate 15 being drawn upwardly and with it the wall 12 is carried upwardly and outwardly upon the marginal portions 20 of the stop whereby the inner telescopic roller section is expanded so as to firmly engage the walls of the outer section 10 and frictionally lock the same so that further movement of the parts in either direction is prevented.

A slight retrograde movement of the screw 22 will release the parts from frictional engagement so that they can be separated while a further loosening of the screw 22 will permit the stop and plate to be readjusted, if desired, for a different window. Without the further loosening of the screw 22 the stop retains its position upon the

inner roller section and the two sections may be restored to their former exact adjustment by means of the stop without measuring anew.

I claim—

1. An extensible curtain roller comprising a rigid outer section and a slotted inner section, and expanding means mounted radially within the slot and extending to an accessible point on the periphery of the roller, substantially as described.

2. An extensible curtain roller comprising a rigid outer section and a slotted inner section, and a wedge member mounted within the slot and extending to an accessible point on the periphery of the roller and acting radially to spread the walls of the slot and cause the inner section to frictionally engage the outer section, substantially as described.

3. An extensible curtain roller comprising an outer tubular section and an inner slotted tubular section, an expanding member mounted within the inner section and bearing outwardly against the walls thereof on each side of the slot, and an adjusting member disposed within the slot and connected to the expanding member whereby to press the walls outwardly to effect a frictional engagement between the two sections, substantially as described.

4. An extensible curtain roller comprising an outer substantially inexpansible tubular section and an inner expansible tubular section telescopically mounted, the inner section provided with a longitudinal depressed slot, an expanding member disposed within the inner section and having inclined upper faces bearing on the lower faces of the depressed portion and bearing with its edges radially against the inner walls of the section on each side of the slot, and a screw disposed within the slot and bearing upon the outer face of the section and connected to the expanding member whereby to cause the same to press the slotted walls outwardly to effect a frictional engagement between the sections, substantially as described.

5. An extensible curtain roller comprising an outer substantially inexpansible tubular section and an inner expansible tubular section telescopically mounted, the inner section provided with a longitudinal depressed slot, an expanding member disposed within the inner section and having inclined upper faces bearing on the lower faces of the depressed portion and also bearing with its edges radially against the inner walls of the section on each side of the slot, an outer expanding wedge-shaped member bearing downwardly within the slot upon the sides of the depressed portion, and a screw connecting the two expanding members whereby to cause the same to approach each other and press the slotted walls outwardly to effect a frictional engagement between the two sections, substantially as described.

6. An extensible curtain roller comprising an outer substantially inexpansible tubular section and an inner expansible tubular section, and an adjustable stop mounted on the inner section limiting the inward telescopic movement of the sections, said stop arranged when set to expand the inner section into frictional locking engagement with the outer section, substantially as described.

7. An extensible curtain roller comprising an outer substantially inexpansible tubular section and an inner expansible tubular section, and an adjustable stop mounted on the inner section and extending radially into alinement with the outer section and limiting the inward telescopic movement of the sections, said stop arranged when set to expand the inner section into frictional locking engagement with the outer section, substantially as described.

EDWARD E. WHITMORE.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."