Feb. 17, 1931. W. H. LARAWAY 1,792,846

WINDOW SHADE ROLLER

Filed Sept. 16, 1929

Fig. 1

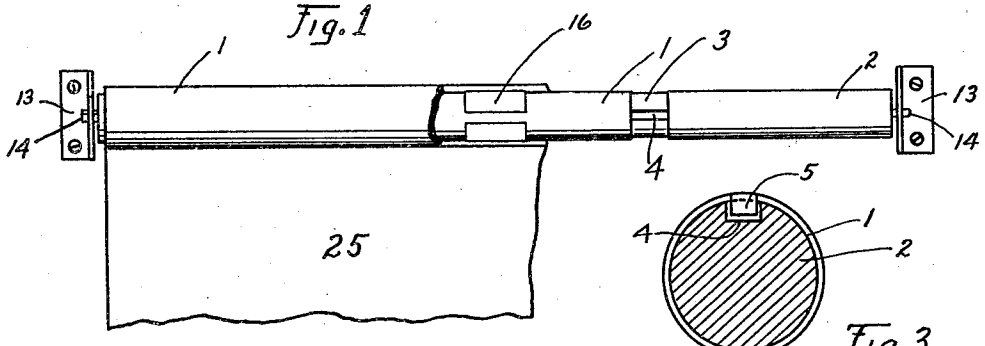

Fig. 3

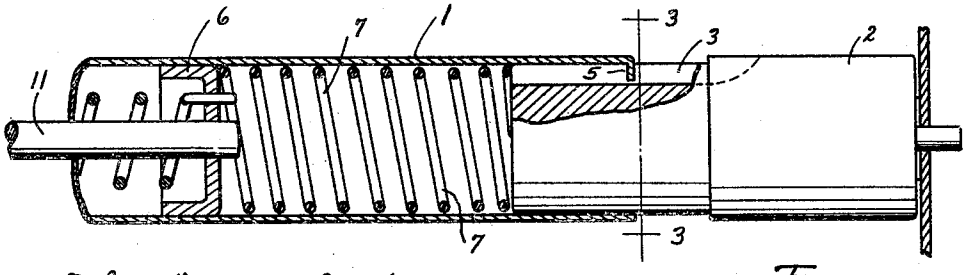

Fig. 2

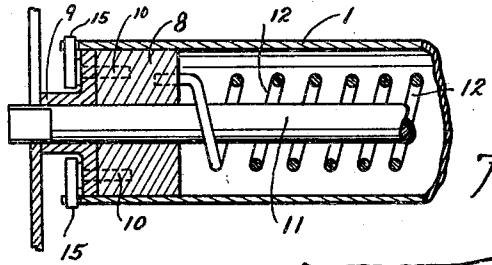

Fig. 4

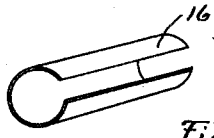

Fig. 5

Fig. 7

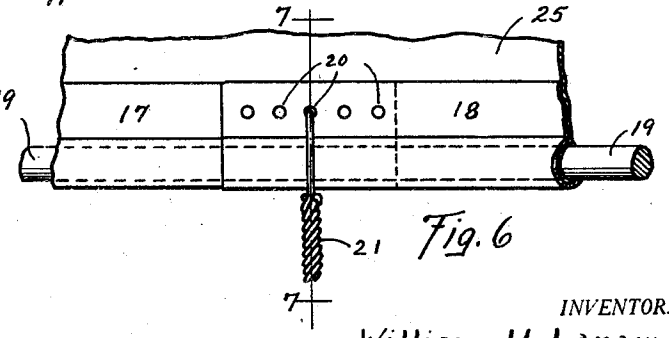

Fig. 6

Witness.

Geo. L. Chapin

INVENTOR.

William H. Laraway

BY Rice & Rice

ATTORNEYS.

Patented Feb. 17, 1931 1,792,846

UNITED STATES PATENT OFFICE

WILLIAM H. LARAWAY, OF GRAND RAPIDS, MICHIGAN

WINDOW-SHADE ROLLER

Application filed September 16, 1929. Serial No. 392,823.

The present invention relates to window shades and more particularly to shade rolls which are longitudinally adjustable to varying window widths within predetermined limits.

The main objects of this invention are to provide a novel and improved window shade roll; to provide new and improved means for securing the shade to the shade roll; to provide new and novel means for securing the shade to its depending rigid transverse member; and to provide a shade roll which is longitudinally adjustable with respect to varying width windows within certain predetermined limits.

An illustrative embodiment of the invention is shown in the accompanying drawings, wherein:

Figure 1 is a front plan view of the shade roll per se, a fragmentary portion of the shade being shown secured thereto;

Figure 2 is a fragmentary portion of one end of the shade roll, partially in section and partially broken away;

Figure 3 is a sectional view taken on line 3—3 of Figure 2;

Figure 4 is a sectional view of a fragmentary portion of the other end of the shade roll;

Figure 5 is a perspective view of a spring clip for securing the upper end of the shade to the roll;

Figure 6 is a fragmentary view of the shade and a pair of spring clips for securing the lower end thereof to its depending rigid transverse member; and

Figure 7 is a sectional view taken on line 7—7 of Figure 6.

Because of varying window widths, it is frequently necessary to have window shades made to order with relatively greater expense, considerable delay, and consequent inconvenience. The device herein shown and described is adjustable and therefore readily assembled and easily installed on the job.

Referring to the drawings, a sleeve member 1, preferably of metal, telescopes with a cylindrical member 2 which may be of wood, or any other suitable material. The inner end 3 of the cylindrical member is preferably turned to a smaller diameter so that when the sleeve is telescoped thereon, the diameter of the shade roll as a whole will be substantially equal thereby providing for equal rolling of the shade.

The inner end of said cylindrical member is provided with a slot 4 which runs longitudinally thereof and the sleeve is provided with a key or flanged lip 5. This key or lip is slidable in said slot to cause rotation of the roll as a unit.

A disc stop 6 having a centrally disposed aperture is interposed within the sleeve intermediate its ends wherein it is swedged or otherwise rigidly secured and an expansion spring 7 whose opposite ends abut the stop and the inner end of the cylindrical member, is disposed within and retained by the sleeve for urging the sleeve and cylindrical member apart, thereby providing a shade roll which is adjustable for varying window widths within predetermined limits.

A bearing member comprising the disc 8 and the hub member 9 are rigidly secured together by the pins 10. This bearing member on which the sleeve is rotatable, supports the horizontally disposed rod 11 at one of its ends and this rod is loosely supported at its other end within the centrally disposed aperture of the disc stop 6. A helical spring 12 surrounds the rod and is connected at its opposite ends to the disc 8 and the stop 6.

Conventional window shade hangers 13, projecting pins 14, and roll dogs or pawls 15 for operation with the conventional roll ratchet such as are all familiar to those skilled in this art, are shown herein.

Spring clips 16 which embrace the upper ends of the shade 25 to the roll instead of securing the shade by tacks as is customary, are provided for convenient assembly and do away with possibility of the shade being torn from the roll as frequently occurs.

Spring tensioned clips 17, 18 for readily securing the lower end of the shade to its depending rigid transverse member 19, are each provided with a plurality of apertures 20 disposed parallel to their upper edges when in assembled relation. These clips are adapted to telescope with each other and em-

brace or grip the shade to the rigid member, which expedient does away with the necessity of stitching. When in assembled relation, one or more of the apertures of one clip register with one or more apertures of the other clip to provide means for securing a draw cord 21 therethrough.

In assembling the device, the roll is hung on the conventional roll hangers and the expansion spring 7 will tend to urge the two parts of the roll apart, thereby causing the roll to be suspended from its hangers. A shade of the correct window width and length is cut and secured to the roll by a suitable number of the clips 16. The lower end of the shade is secured to the rigid transverse depending member 19 by means of the spring tensioned clips 17, 18 in the manner heretofore described and the pull cord 21 passed through the proper registering apertures.

By pulling down on the cord, the spring 12 is wound up and placed under tension, but retained under tension by the operation of the conventional dogs or pawls 15 engaging with their respective ratchets. Releasing the dogs or pawls in the customary manner will cause the shade to be rolled up by the spring 12.

It will thus be seen that a novel and improved window shade roll is herein shown and described which may be readily assembled and easily installed for use in windows of varying widths within certain predetermined limits and without the necessity of providing a custom made window shade at a relatively greater expense, delay, and consequent inconvenience.

While but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. In a longitudinally adjustable window shade roll, a sleeve member and a cylindrical member telescoping therewith, said members being keyed and rotatable only as a unit, a disc stop interposed and secured within said sleeve member intermediate its ends, an expansion spring disposed within said sleeve member interjacent said disc stop and the inner end of said cylinder for urging said members apart, a bearing member disposed within said sleeve member adjacent its outer end and rotatable relatively thereto, a hub pinned to the bearing member at the outer face thereof, a rod within said sleeve member, the inner end of said rod being supported by and rotatable relatively to said disc stop and the outer end of said rod being secured to said bearing member and extending through the hub member, and a helical spring surrounding said rod whose opposite ends are secured to said disc stop and said bearing member.

2. In a longitudinally adjustable window shade roll, a sleeve member, a stop disc mounted within the sleeve and non-rotatable with respect thereto, a bearing member journalled within the sleeve and spaced from the stop disc, a hub pinned to the outer face of the bearing member, a rod extending through the hub and bearing member and across the space between the latter and the stop disc and supported at its inner end by the said disc, and a helical spring surrounding said rod and connected at one end to the stop disc and at the other end to the bearing member.

In testimony whereof I have hereunto set my hand at Grand Rapids, Michigan, this 13th day of September, 1929.

WILLIAM H. LARAWAY.