May 21, 1929. L. M. LASELL 1,713,666

ROLLER SHADE CASING

Filed July 17, 1926

Fig. 1

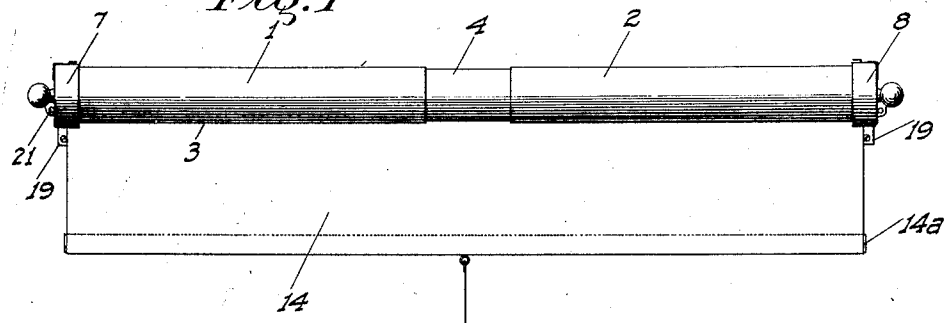


Fig. 2

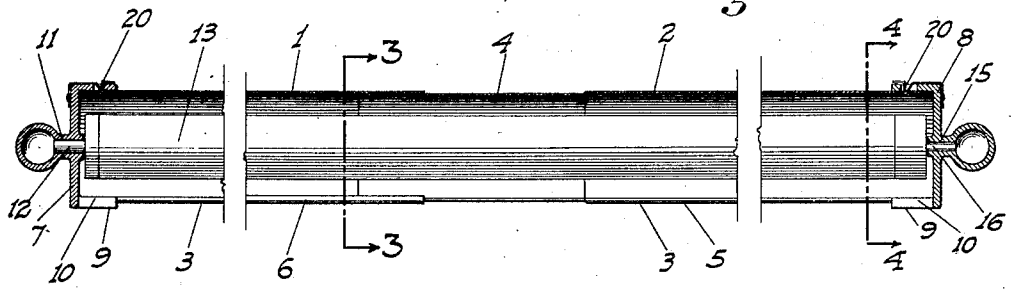


Fig. 3

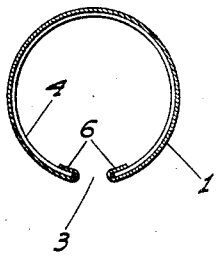


Fig. 4

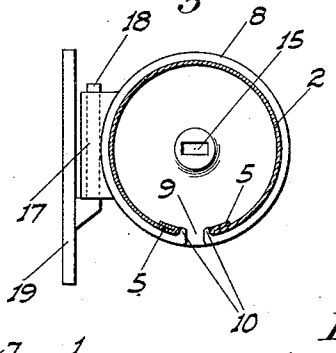


Fig. 5

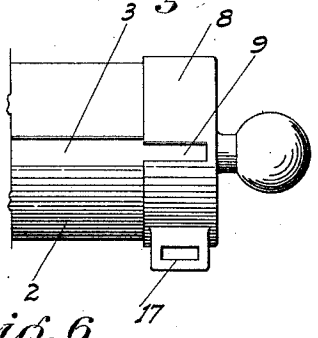
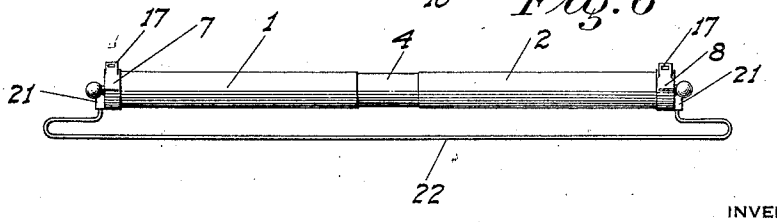


Fig. 6



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UNITED STATES PATENT OFFICE.

LOUIS M. LASELL, OF SACRAMENTO, CALIFORNIA.

ROLLER-SHADE CASING.

Application filed July 17, 1926. Serial No. 123,088.

This invention relates to casings for shades, and is a continuation in part of my application for patent, Serial No. 106,819 filed May 5th, 1926. The principal object of the invention is to provide a casing for an ordinary roller-shade, so constructed that the shade when rolled up will be protected from dust and the like, flies and other insects cannot light thereon, and the neatness of appearance of the shade structure as a whole is greatly improved over what is at present the case.

A further object of the invention is to provide a structure for the purpose, to be detachably hung above a window, which will itself support the usual shade-roller pins in the proper manner, and which is so constructed that the shade and roller may be easily installed in or removed from the casing whenever desired.

The casing does not interfere with the raising or lowering of the shades but rather aids in this operation by causing the shade to be maintained in proper transverse alinement with its roller at all times.

A further advantage of my device is that when the shade is to be taken down, the casing is merely removed from its supporting brackets without disturbing the shade and without the danger of the roller-spring unwinding, as frequently happens with the ordinary roller supporting means.

A further object is to provide a longitudinally adjustable structure so as to enable different lengths of shade-rollers to be mounted in any casing, and to compensate for the variation frequently found in rollers of presumably equal length.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a front elevation of the casing structure with the shade installed therein.

Fig. 2 is a longitudinal section of the structure partly broken away, showing the shade-roller installed therein.

Fig. 3 is a cross section on the line 3—3 of Fig. 2.

Fig. 4 is a cross section on the line 4—4 of Fig. 2.

Fig. 5 is a bottom plan view of one end of the casing.

Fig. 6 is a top plan view of the device shown in connection with a drape-hanger rod.

Referring now more particularly to the characters of reference on the drawings, the casing comprises tubular members 1 and 2, preferably of sheet metal, open at both ends and having a longitudinal slot 3 from end to end. The tube 2 at one end is sufficiently reduced in diameter for a short length as at 4 to snugly telescope into the adjacent end of tube 1. The tube 2, along the slot is crimped inwardly as at 5 for the length thereof beyond the portion 4 to provide smooth rounded edges for the slot and at the same time reinforce the tube. Similarly, the tube 1 is crimped inwardly along the slot-edges as at 6. This crimping at the inner end of the tube and for an extent equal to the length of the portion 4 of tube 2, is not pressed flat, but forms grooves to receive the edges of the metal along the slot of the portion 4, as shown in Fig. 3. The tubes may therefore be longitudinally adjusted, to alter the operative length between their opposed ends, but cannot turn in each other. End caps 7 and 8 are detachably and snugly fitted over the ends of the tubes 1 and 2, said caps having slots 9 to aline with the slot 2. Flanges 10 project inwardly from the edges of the slots 9 to project into the adjacent portions of the slot 3, and engage the crimped edges of said slot.

The cap 7 has a central round socket 11 to receive the usual round pin 12 on one end of the roller 13 of an ordinary shade 14. The other cap 8 has a central rectangular socket 15 to receive the usual rectangular pin 16 on the other end of the roller, to prevent rotation of said pin as is necessary to cause the roller to function properly.

The caps on the outside are provided with socket sleeves 17 disposed at right angles to the plane of the slots therein to receive vertical stems 18, projecting upwardly from bracket plates 19 adapted for attachment to a window casing. It will therefore be seen that when the casing structure is mounted on the brackets it will be impossible for the caps to come off, and when the casing is removed from the brackets the roller pins remain undisturbed so that the usual roller spring cannot unwind.

In order to prevent the possibility of the caps slipping off the tubes when the caps are removed from the brackets, I preferably mount spring catches 20 on the caps, adapted to disengageably project into slots or recesses provided in the tube-portions in the caps, as shown in Fig. 2.

In operation to apply the shade to the casing the end caps are removed, the roller is inserted into the tubes from one end thereof, the shade being unwound from the roller sufficiently so that the bottom bar 14ª of the shade lies outwardly of the tube, while the shade itself passes through the slot 2. The cap 8 is then placed over the outer end of the tube 2 and the socket 15 simultaneously engaged with the pin 16. The other cap 7 is then similarly mounted in place on the tube 1. The casing is then ready to hang up. Owing to the provision of the flanges 10 on the caps, and the springs 20, the caps cannot then move relative to the tubes and the slot in the latter is prevented from any tendency to closing up.

The length of the tubes is such that the roller will fit properly between the ends of the caps, so as to permit of the rotation of the roller without binding, yet without undue lateral play.

The shade as pulled down will always be maintained in the same transverse plane and cannot shift laterally of the roller to any extent, owing to the cap-ends which terminate the slots 9 and which form guides for the edges of shade.

It will be impossible for flies and other insects to cling to the shade and be mashed between the turns of the shade when the latter is rolled up, since the edge of the slot 3 will sweep the insects off the shade before the latter turns around the roller. The width of the slot 3 is preferably such as to prevent the bottom shade bar 14ª from passing therethrough. This prevents the end of the shade from being drawn into the casing in the event that the winding up mechanism should get out of control, as sometimes occurs.

If desired, the end caps may be provided with horizontal and outwardly facing socket members 21 to detachably receive the angled ends of a drape-hanger rod 22 which extends parallel to the casing in front of the same, as shown in Fig. 6. By this means, the drapes may be hung in definitely associated relation with the shade, so that the shade and drapes may be taken down or put up together. The rod 22 being removable, however, the drapes may be disassociated from the shade casing if desired.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claim.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

A roller shade casing comprising a tube provided with a longitudinal slot, relatively heavy end caps arranged to be engaged with the ends of the tube, such end caps having slots to register with the tube slot but being of less width than such slot, and projecting flanges on the edges of the cap slots overlapping the adjacent edges of the tube slot.

In testimony whereof I affix my signature.

LOUIS M. LASELL.