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ROLLER-CURTAIN GUIDING AND LOCKING DEVICE.

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To all whom it may concern:

Be it known that I, WILBERT M. RICHARDS, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Roller-Curtain Guiding and Locking Devices, of which the following is a full, clear, and exact description.

My invention relates to improvements in roller curtain guiding and locking devices for roller porch curtains or the like, and it consists in the combinations, constructions, and arrangements herein described and claimed.

An object of my invention is to provide a roller curtain guiding and locking device which is adapted to positively lock the roller from a vertical or a rotative movement.

A further object of my invention is to provide a device of the type described which holds the unrolled portion of the curtain taut, thus preventing any flapping thereof.

A further object of my invention is to provide a device of the type described which is adapted to be secured to any roller curtain without altering the construction of the latter.

A further object of my invention is to provide a device of the type described which makes use of but a single guiding wire on each side thereof.

A further object of my invention is to provide a device of the type described which is adapted to positively lock the curtain roller in adjusted position, thus doing away with the necessity of tying the cords which raise and lower the roller.

A further object of my invention is to provide a device of the type described which is simple in construction, consists of a minimum number of parts, and which is not likely to easily get out of order.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 is a front elevation of the device as shown operatively applied to the upper and lower beams of a porch or the like.

Figure 2 is a section along the line 2—2 of Figure 1, and

Figure 3 is a section along the line 3—3 of Figure 1.

Figure 4 is a perspective detail view of the members 13 and 19 shown in dismantled relation.

In carrying out my invention, I make use of the ordinary transverse members or beams 1 and 2, to which I secure vertically extending guide wires 3 and 4. A roller curtain of ordinary type which comprises a roller 5 and a curtain 6, has its free ends secured to the inner side of the member 1 by means of tacks 7, or the like. To each end of the roller 5 I secure, by means of screws 8, a tapered pinion 9.

As clearly shown in Figures 1 and 2, the pinion 9 is provided with a flange 10, which is disposed adjacent to the end of the roller 5; and is also provided with a bore 11 which communicates with a recess 12 for a purpose hereafter described. A guide member 13 has a stub shaft 14, which is disposed in the bore 11, and which is upset at its inner end so as to grip a washer 15. This construction prevents the movement of the member 13 in an axial direction with respect to the pinion 9. The member 13 is also provided with a circular portion 16, on the face of which the pinion 9 is adapted to rotatively engage.

The members 13 are provided with openings 17 therein, through which the wires 3 and 4 are adapted to extend. As clearly shown in Figure 2, the members 13 have outwardly projecting lugs 18 against which the wires 3 and 4 are adapted to lie. I then provide a means by which the roller 5 is prevented from rotating or from moving along the wires 3 and 4. This means comprises a clamping member 19 which has sides 20 that are adapted to straddle the body portion of the member 13. The ends of the sides 20 are adapted to engage with the wires 3 and 4, and to force the latter against the lugs 18 so as to prevent movement of the member 13 with respect to the wires. The members 19 are also provided with a tooth-shaped member 21 which takes the place of a pawl, and is adapted to engage with the pinion 9 so as to prevent rotation thereof with respect to the member 13. The members 19 are operatively secured to the members 13 by means of wing bolts 22 which are disposed in openings 23 and 24 in the members 13 and 19, respectively. It will thus be seen that a slight rotation of the wing nuts 22 will cause the members 19 to move toward the members 13 so as to positively grip the
wires 3 and 4 and to engage the pinion 9 to prevent the rotation thereof.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The curtain roller is provided with the ordinary cords which are adapted to raise or lower the roller in the ordinary manner. The cords 25 are disposed adjacent to each side of the curtain 6 and are secured at one of their ends to eyelets 28 which are carried by the member 1. The cords are then passed down around the roller 5, are passed through the eyelets 26, and are then passed through an eyelet 27, from which they hang downward so as to be readily grasped by the operator.

When the curtain is desired to be raised, the wing nuts 22 are rotated so as to release the wires 3 and 4 and the pinions 9 from the members 19. The curtain is now free to be raised. The cords 25 are pulled, which in turn rotate the roller 5 and cause the roller to move upwardly, and at the same time to wind the curtain 6 thereon. In the ordinary case, the cords 25 would have to be tied at their free ends so as to prevent the unwinding of the roller 5. In my present device, however, the wing nuts 22 are tightened so as to cause the members 19 to positively grip the wires 3 and 4 and to engage with the pinions 9 so as to prevent the rotation of the pinions. It will therefore be seen that the roller 5 is positively clamped in position, and is prevented from movement along the wires 3 and 4. Furthermore, the roller 5 is prevented from rotation, since the portions 21 of the members 19 engage with the pinions 9, and prevent the rotation of the pinions 9 with respect to the members 13. If a gust of wind should strike the curtain 6, the curtain would not flap, since it is held taut by the roller 5. In the ordinary roller, if a gust of wind should strike the curtain 6, the curtain would unwind from the roller 5, even though the roller was held in a fixed position. In the present device, however, this is obviated, since the roller 5 is positively prevented from rotation and therefore cannot feed any more of the curtain 6 to the unwound portion of the curtain. The extended portion of the curtain 6 will act as a rigid wall.

The device is very simple, and consists of a minimum number of parts. It may be readily applied to any curtain roller without altering the construction of the latter. It is obvious that the device provides a positive means for preventing the rotation of the roller, or of the movement of the roller in a vertical direction. The device is durable and efficient for the purpose intended, and is not likely to easily get out of order.

I claim:

1. A device of the type described comprising a member having an opening therein adapted to receive a guide wire, said member having a stub shaft, a pinion secured to said stub shaft, and a clamping and locking member adjustable secured to said first named member, said clamping member being adapted to engage with the wire and to bind it against said first named member, and to engage with said pinion to prevent the rotation thereof.

2. The combination with a roller, of a pinion axially aligned with said roller and being secured to the end of said roller, a guiding member rotatably carried by said pinion and having an opening therein adapted to receive a guide wire, and a clamping member carried by said first named member and being adapted to engage with the wire and to bind it against said first named member, and to engage with said pinion to prevent the rotation thereof.

3. A device of the type described comprising a guide member having an opening therein adapted to receive a guide wire and having lugs disposed adjacent to the ends of the opening, a stub shaft carried by said member, a pinion carried by said stub shaft, a clamping member having sides adapted to be moved toward said lugs to engage with the wire and to bind it against said lugs, said clamping member having a projection adapted to engage with said pinion to prevent the rotation thereof, and a wing bolt for adjustably securing said clamping member to said guiding member.

4. The combination with a curtain roller and guide wires of manually controlled means for locking said roller against rotation and for securing said roller in adjusted position on said wires, said means comprising two guide members having openings therein adapted to slidably receive said wires, integral shafts carried by said members, pinions rigidly secured to the ends of said rollers and being rotatably secured to said rotation of said pinions with respect to said shafts, locking means adapted to prevent the members and to clamp said wires between said members and said means, and set screws securing said locking means to said members, said set screws being adapted to cause said locking means to operatively engage with said pinions and wires when actuated.

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