

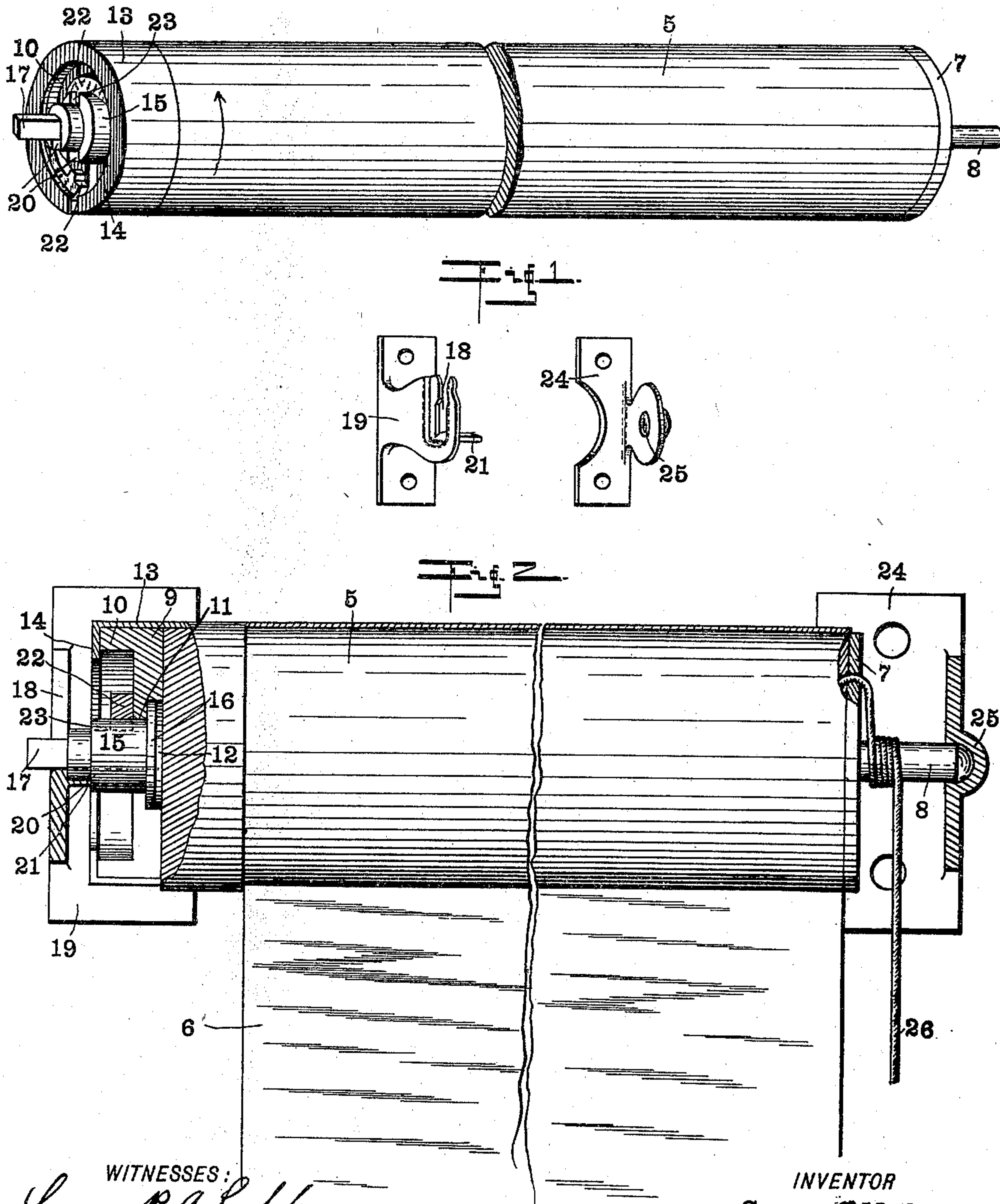
No. 705,594.

Patented July 29, 1902.

G. C. MATHERS.
SHADE ROLLER AND FIXTURE.

(Application filed Jan. 29, 1902.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

GEORGE C. MATHERS, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-THIRD
TO FRANK R. WOLF, OF INDIANAPOLIS, INDIANA.

SHADE-ROLLER AND FIXTURE.

SPECIFICATION forming part of Letters Patent No. 705,594, dated July 29, 1902.

Application filed January 29, 1902. Serial No. 91,755. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. MATHERS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Shade-Rollers and Fixtures, of which the following is a specification.

My invention relates to an improvement in rollers for window-shades and in the supporting-fixtures therefor.

The object of my invention is to produce a roller and fixtures of such character that the shade may be raised and lowered by unrolling from or rolling upon the roller without the use of a spring. The result accomplished will be the same as is now accomplished by that class of shade-rollers known as "spring-rollers;" but the expensive spring which is used in this type of shade-rollers for supporting the weight of the shade and winding the same upon the roller is omitted.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my improved roller and fixtures. Fig. 2 is an enlarged detail, partly in axial section, of my improved roller and fixtures.

In the drawings, 5 indicates a roller, generally of wood, of any preferred diameter and of a length sufficient to receive the shade 6. Attached to one end of the roller 5 is a plate 7, provided with an axial pin 8. Attached to the opposite end of roller 5 is a disk or plate 9, provided with a flange 10, which lies parallel with the axis and of an external diameter substantially equal to the diameter of roller 5. Plate 9 is provided with an axial bore 11, which at its inner end, or that end adjacent the end of roller 5, is enlarged to form a recess 12. Plate 9 is attached to the roller so as to rotate therewith in any desired manner—as, for instance, by a cover 13, which is adapted to envelop the plate 9 and hold the same in place by means of a flange 14.

Revolubly mounted in bore 11 is a pin 15, which is provided at its inner end with an enlarged head 16, adapted to lie and rotate within recess 12. Pin 15 extends some distance beyond the end of plate 9 and cover 13 and is provided at its end with a squared

portion 17, which is adapted to be received in the usual slot 18 of the fixture or supporting-bracket 19. In order to properly support pin 15, which is to be held against rotation, so that the roller 5 may rotate freely thereon, I form in one side of pin 15 an axial groove 20, which is adapted to receive a tongue 21, extended from fixture 19 at the bottom of groove 18. The weight of the adjacent end of the roller is thus supported through pin 15 by tongue 21. Pivoted upon axes parallel with the axis of roller 5 are two pawls 22 22, a lug on the free end of either of which is adapted to drop into a notch 23, formed in the upper side of pin 15, the arrangement being such that when either one of pawls 22 is brought so that its free end is substantially above notch 23 the said free end may drop into notch 23 under certain circumstances, so as to prevent rotation of the roller in the direction indicated by the arrow in Fig. 1, said direction being that which allows an unwinding of the shade 6. The action of pawls 22 is similar to that of similar pawls in the spring type of roller, except that the direction of action is reversed.

That end of roller 5 which carries spindle 8 is supported by means of a fixture 24, the projecting portion of which is provided with a blind socket 25, adapted to receive the end of spindle 8. Secured to plate 7 is one end of an operating-cord 26, which is adapted to be wound upon the spindle 8 between plate 7 and the projecting portion of fixture 24, as shown in Fig. 2, the direction of winding the cord being such that a pull upon the free end of the cord will rotate roller 5 in the direction opposite to that indicated by the arrow in Fig. 1. Plate 9 and cover 13 are each provided with a radial slot 27 and 28, respectively, to allow the ready insertion of tongue 21 into groove 20.

In operation the shade 6 is rolled upon roller 5, the end of spindle 8 is inserted in the blind socket 25 of fixture 24, and the squared end 17 of pin 15 dropped into slot 18 of fixture 19, groove 20 of the pin receiving tongue 21 of the fixture 19, so that the pin is supported by the tongue and the fixture operates to prevent any rotation or movement of the pin. In this position the upper pawl 22 lies

with its free end in notch 23 of pin 15 and one or two turns of cord 26 are wrapped about spindle 8. A slight pull upon cord 26 rotates roller 5, so as to withdraw pawl 22 from notch 5 23, when if the cord be suddenly released the roller 5 will be rotated in the direction indicated by the arrow by the weight of the shade, the pawls 22 being held out of engagement with the notch 23 of pin 15 in the usual manner by centrifugal force. Cord 26 is there- 10 upon wound upon spindle 8, and a slight detaining force thereon results in a slowing down of the rotation of roller 5 to such point that one of the pawls 22 may drop into notch 15 23 and prevent further rotation. Any position of the shade may be obtained by proper manipulation of cord 26 in a manner readily apparent.

In that class of rollers in which the weight 20 of the shade is supported by a spring different sizes of rollers and springs must be provided for different widths and lengths of shades. In my present construction no spring is used, and the weight of the shade is supported by one or the other of pawls 22. As 25 a consequence the same parts may be used

for any width or length of shade, thus materially reducing cost.

I claim as my invention—

A shade-roller consisting of a main body 30 portion of cylindrical and usual form, a plate 10 secured directly to one end of said roller, the said plate having a socket 12 formed in its inner end, a pin 15 journaled in plate 10 and provided with an enlarged head 16 lying 35 within the socket 12 so that the adjacent end of the roller is supported by and journaled upon said pin, a pawl 22 carried by plate 10 and adapted to engage a groove 23 formed in pin 15, a polygonal end 17 forming a part of 40 pin 15; and a plate 7 provided with an extended pintle 8, said plate 7 being secured directly to that end of the roller 5 opposite to the end to which plate 10 is secured.

In witness whereof I have hereunto set my 45 hand and seal, at Indianapolis, Indiana, this 25th day of January, A. D. 1902.

GEORGE C. MATHERS. [L. S.]

Witnesses:

ARTHUR M. HOOD,
FRANK R. WOLF.