

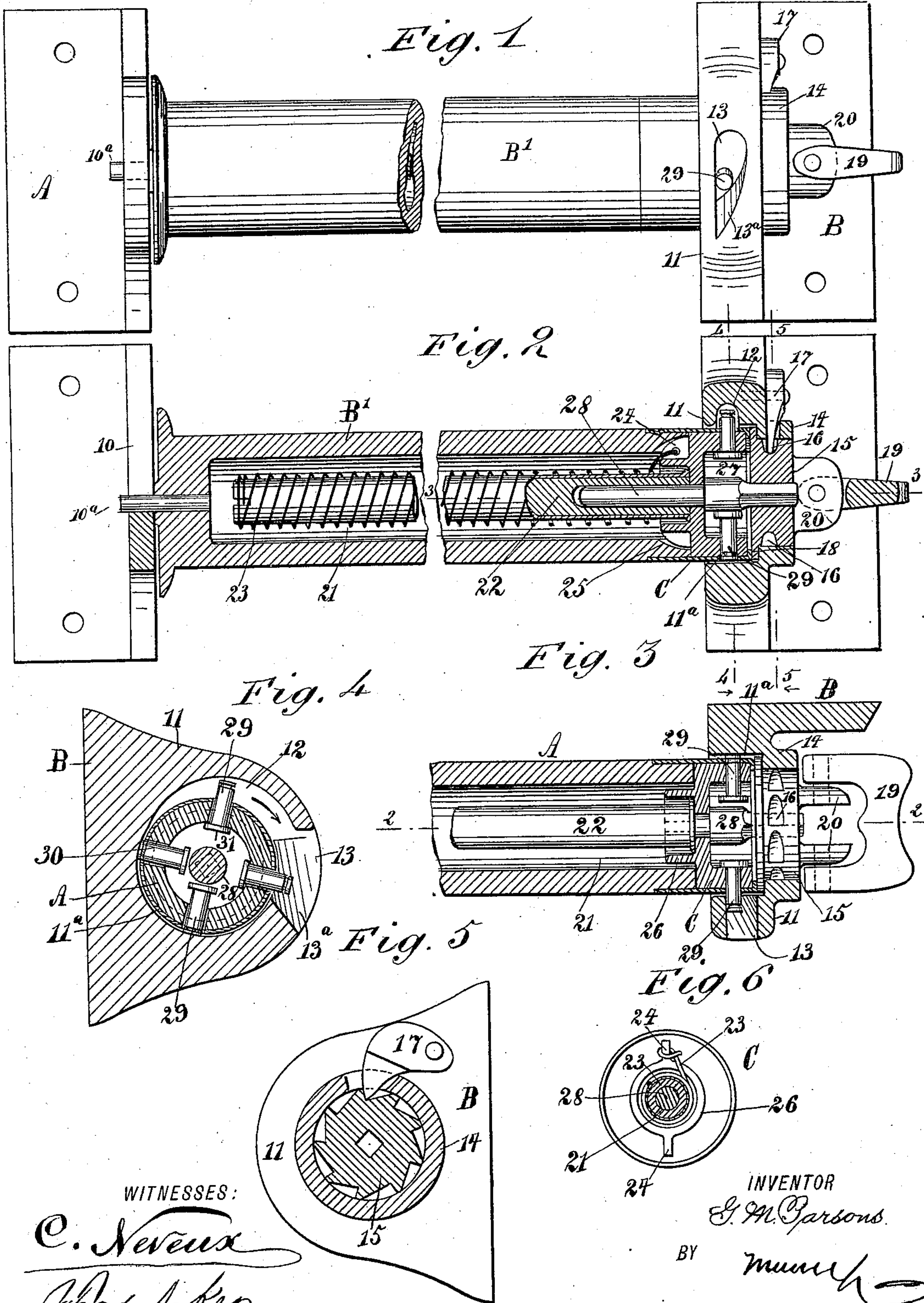
(No Model.)

G. M. PARSONS.

WINDOW SHADE ROLLER AND BRACKET THEREFOR.

No. 575,572.

Patented Jan. 19, 1897.





# UNITED STATES PATENT OFFICE.

GEORGE MULFORD PARSONS, OF CARSON, NEVADA, ASSIGNOR TO HENRY C. CUTTING, OF SAME PLACE.

## WINDOW-SHADE ROLLER AND BRACKET THEREFOR.

SPECIFICATION forming part of Letters Patent No. 575,572, dated January 19, 1897.

Application filed April 25, 1896. Serial No. 589,054. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE MULFORD PARSONS, of Carson city, in the county of Ormsby and State of Nevada, have invented a new and useful Improvement in Window-Shade Rollers and Brackets Therefor, of which the following is a full, clear, and exact description.

My invention relates to an improvement in window-shade rollers; and the object of the invention is to provide a spring-roller so constructed that when in position in its brackets the spring of the roller may be expeditiously and conveniently placed under desired tension, it being necessary in the ordinary form of roller to remove the roller from its brackets before the spring can be adjusted.

Another object of the invention is to provide a means whereby the winding of the shade on the roller may be accomplished in a convenient manner and whereby the roller may be made to make a partial revolution, an entire revolution, or a number of revolutions, as occasion may demand.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the improved roller and the brackets in which the roller is supported. Fig. 2 is a longitudinal vertical section through the roller and through its brackets, the section being taken substantially on the line 2 2 of Fig. 3. Fig. 3 is an enlarged horizontal and longitudinal section taken practically on the line 3 3 of Fig. 2. Fig. 4 is a vertical section taken substantially on the line 4 4 of Fig. 2. Fig. 5 is a section taken practically on the line 5 5 of Fig. 2; and Fig. 6 is an inner face view of the winding-disk, which is adapted for attachment to a roller.

In carrying out the invention two brackets A and B are employed, the bracket A being provided with an open slot 10, adapted to receive the rounded trunnion 10<sup>a</sup> of the shade-

roller B'. The bracket B is provided in its offset member 11 with a circular opening 11<sup>a</sup>, as shown in Fig. 4, and in one portion of the said opening an inclined or cam groove 12 is produced, which groove at its wider end connects with an opening 13, made in the aforesaid offset 11 of the bracket, as illustrated in both of Figs. 1 and 4. This opening 13 is of peculiar shape, having one of its sides straight and the other side curved, so that the curved side will sharply meet the lower end of the straight side of the opening and will have an angular connection with the upper portion of the aforesaid straight side, as illustrated in Fig. 3, and the curved wall of the opening 13 is given a downward and an inward inclination, as shown at 13<sup>a</sup> in Figs. 1 and 4.

A tension-head 15 is located in the offset member 11 of the bracket B, the said tension-head being held to turn partially within the said bracket and partially within an annular collar 14, formed on the exterior or outer face of the bracket, as shown in Figs. 2 and 3. The said tension-head is provided with a series of sprocket-openings 16 in its periphery, and the aforesaid sprocket-openings 16 are adapted to pass beneath an opening in the collar 14 of the bracket B, through which opening a pawl 17 is entered, pivoted to the bracket, and the openings 16 are so formed that the tension-head may be free to turn in one direction, but cannot be moved in an opposite direction as long as the pawl 17 is in engagement with the aforesaid head. A flange 18 is formed at the periphery of the inner face of the said tension-head, which bears against the outer side wall of the opening 11<sup>a</sup> in the bracket B. A key 19 is connected with the outer end of the tension-head 15, being preferably pivoted to lugs 20, formed upon the aforesaid head, as shown in Figs. 2 and 3.

A chamber 21 is made within the roller B', and a shaft 22 is located longitudinally in this chamber, the said shaft being surrounded by a spiral spring 23, which at its inner end is attached to the said shaft in any suitable or approved manner, while the outer end of this spring is secured to a lug 24, formed upon the inner face of a winding-disk C, the said wind-



ing-disk forming a portion of one end of the roller—that end which is to be located adjacent to the bracket B. The lugs 24 are two in number and enter slots made in the wall of the roller-chamber 21, whereby the winding-disk is held from turning independent of the roller, the roller and disk being compelled to revolve together.

A collar 26 is formed upon the inner face of the winding-disk, into which the outer end of the roller-shaft 22 is introduced, and an annular chamber 27 is formed in the outer face of the winding-disk C. A trunnion 28 is passed through the winding-disk and into the shaft 22 of the roller, being held in the latter by frictional contact or in any other approved manner which will enable the shaft 22 to be revolved by turning the trunnion 28. The extreme outer end of the trunnion 28 is squared, and this squared portion of the trunnion is fitted in a similarly-shaped opening made in the tension-head 15.

It is evident that under the construction above set forth the exterior of the tension-head is formed, substantially, as a ratchet-wheel, and in fact the said tension-head is practically a ratchet, as illustrated in Fig. 5.

Any desired number of pins 29 is held to slide in suitable openings 30, made in the winding-disk C at its chambered portion 27, and these pins may extend outward a predetermined distance beyond the periphery of the roller and the periphery of the disk when attached to the roller. Each pin is provided with a head 31 upon its inner end, as shown in Fig. 4, preventing the pins from leaving the said disk, and when the pins extend within the chamber 27 of the disk until their heads are practically near the squared trunnion 28 of the roller the outer ends of the said disk will be substantially flush with its peripheral surface. It is evident that under the foregoing construction by turning the key 19 the spring of the roller B' may be placed under any desired tension without removing the roller from its position in its brackets.

In operation, if the shade is drawn steadily and smoothly downward the various pins 29 will gravitate naturally within the winding-disk, enabling the disk to revolve readily in the opening 12<sup>a</sup> of the bearing B; but when the shade is violently or quickly released the pins which are on the descending portion of the roller will be drawn outward by centrifugal force and will travel in the cam-groove 12 of the opening in the bracket B, and one of the said pins will become jammed in the exterior opening 13 of the bracket, as shown in Fig. 1, preventing the roller from turning further. The entire device is exceedingly simple, it is durable, and it is also economic.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a spring-controlled roller, and bracket-supports for the same, one

of said brackets being provided with an offset member having an opening to receive one end of the roller, the offset member being provided with an annular collar formed on its exterior or outer face, of a ratchet-wheel mounted to turn partially within the said collar and having a flange formed at the periphery of its inner face and bearing against the outer side wall of the opening in the offset member, the said ratchet-wheel being connected with the winding-spindle of the roller-spring, and a pawl located on the bracket and engaging with the teeth of the said ratchet-wheel, as and for the purpose specified.

2. The combination with a spring shade-roller provided with a chamber at one of its ends, and pins loosely held in openings formed in the wall of the said chamber, the openings extending from the chamber to the exterior of the roller, of a bracket in which the pin-carrying portion of the roller is mounted to turn, the said bracket being provided with means for engaging the said pins when forced outward from the periphery of the roller, as and for the purpose set forth.

3. The combination with a spring shade-roller having a chamber at one of its ends, and pins held to slide in openings extending from the chamber to the exterior of the roller, of a bracket in which the pin-carrying section of the roller is mounted to turn, the said bracket being provided with means for engaging the said pins when forced outward from the periphery of the roller, and a ratchet-wheel connected with the spring of the roller and adapted to regulate the tension of the same, as and for the purpose specified.

4. The combination, with a spring shade-roller provided with a chamber at one of its ends, and pins loosely contained in openings extending from the chamber to the exterior of the roller, of a bracket in which the pin-carrying section of the roller is mounted to turn, the said bracket being provided with an opening to loosely receive the said roller, a portion of the wall of the said opening having a tapering groove made therein, so located as to receive the pins of the roller when forced outward beyond its periphery, the bracket being further provided with a slot having a contracted section, the said slot being located at the wider end of the groove in the said bracket and in communication with the said groove, as set forth.

5. The combination, with a spring shade-roller having a chamber at one of its ends, and pins held to slide in the material of the roller between the chamber and the outside of the roller in either direction, of a bracket adapted to receive the chambered end of the said roller, the receiving-opening of the bracket having a tapering groove therein and an outlet-opening communicating with the groove and having a contracted section, the outlet-opening and the aforesaid groove being in

position to receive the pins when forced out-  
ward beyond the periphery of the roller, a  
ratchet-wheel connected with the spring of  
the roller, adapted to regulate the tension of  
5 the same, means for turning the said ratchet-  
wheel while the roller is still in the bracket,  
and a pawl carried by the bracket and engag-

ing with the aforesaid ratchet-wheel, as and  
for the purpose specified.

GEORGE MULFORD PARSONS.

Witnesses:

THOS. FITZSIMMONS,

THOS. DALE.