

E. S. JOHNSTON.
WINDOW-SHADE ROLLERS.

No. 179,319.

Patented June 27, 1876.

FIG. 1.

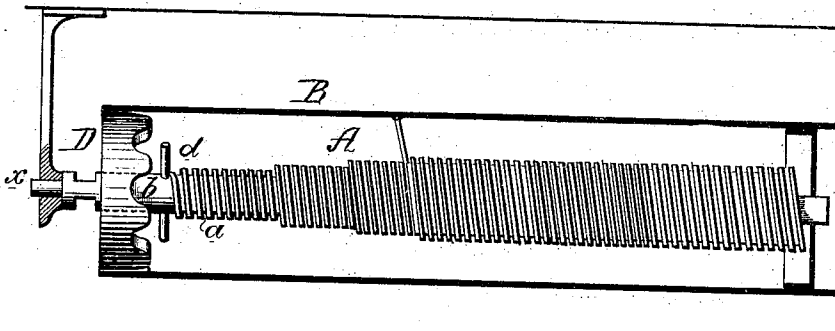


FIG. 2.

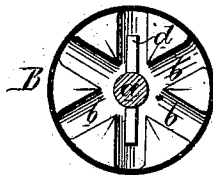
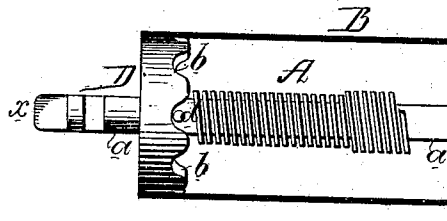


FIG. 3.

Witnesses, Harry Smith
Thomas M. Truman

Edwin S. Johnston
by his Atty.
Hudson and Son.

UNITED STATES PATENT OFFICE.

EDWIN S. JOHNSTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WINDOW-SHADE ROLLERS.

Specification forming part of Letters Patent No. **179,319**, dated June 27, 1876; application filed December 30, 1874.

To all whom it may concern:

Be it known that I, E. S. JOHNSTON, of Philadelphia, Pennsylvania, have invented certain Improvements in Curtain-Fixtures, of which the following is a specification:

My invention relates to that class of spring-rollers for window-shades, in which the spring is prevented from recoiling when the shade is withdrawn from the bracket; and the object of my invention is to construct a cheap and effective spring-roller of this character. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a sectional view of part of my improved spring-roller; Fig. 2, a sectional plan of the same with the parts in a different position, and Fig. 3 a transverse section of the roller.

B is the shade-roller, to which the shade is secured, the latter being balanced by a spring, A, wound upon a spindle, *a*, to which one end of the said spring is connected. The opposite end of the spring is attached to the roller B, the latter being arranged to revolve on the spindle *a*, which is prevented from turning by its flattened or square end *x*, adapted to an opening of corresponding form in one of the brackets, as shown in Fig. 1.

Within the end of the roller B is secured a disk, D, having on its inner face a series of transverse notches or recesses, *b b*, to which is adapted a pin, *d*, secured to and projecting on opposite sides of the spindle *a*, the spring having a tendency to force the said spindle outward, and to bring the pin into gear with the notches in the disk D.

When the flat end *x* of the spindle is in the bracket which carries one end of the roller,

as shown in Fig. 1, the spindle, which cannot turn, is maintained in such a position that the pin *d* and recessed disk will be out of gear; but the moment the spindle is released from the bracket the spring A will force the spindle outward, and move the pin into gear with the recessed disk D, thereby preventing the unwinding of the spring, as shown in Fig. 2. It will thus be seen that the spring performs two duties—namely, that of balancing the shade, and that of moving the pin and disk into gear, and preventing the turning of the spindle and unwinding of the spring when the roller is detached from its bearings.

I wish it to be understood that I do not claim separately the spindle and its pin in combination with the roller and its recessed disk; but my invention consists in combining with these parts a single spring, which answers the double purpose of balancing the shade and moving the pin and disk into gear.

I claim as my invention—

The spindle *a*, having an angular-shaped end, *x*, adapted to a corresponding opening in the bracket, and having a projecting pin, *d*, in combination with the roller B, having a disk, D, recessed for the reception of the said pin, and with the single spring A, for balancing the shade and moving the said pin and disk into gear, all as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN S. JOHNSTON.

Witnesses:

HUBERT HOWSON,
HARRY SMITH.