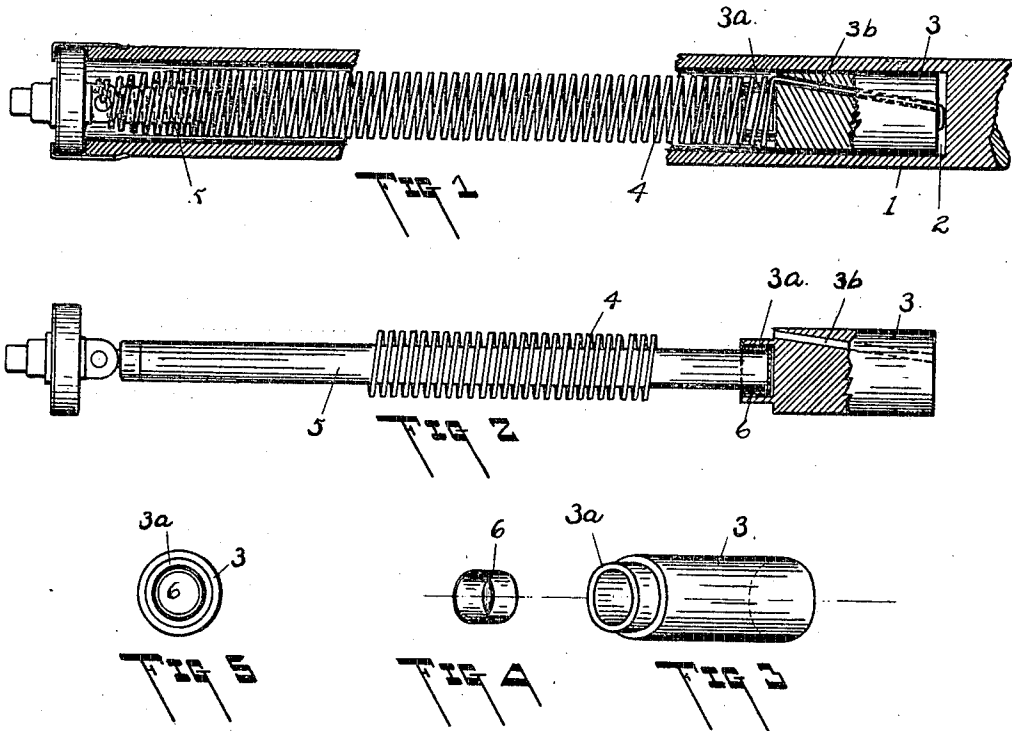


No. 812,134.

PATENTED FEB. 6, 1906.

W. D. JAMES.
SHADE ROLLER.

APPLICATION FILED OCT. 9, 1905.



WITNESSES:

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WILLIAM D. JANES, OF SAGINAW, MICHIGAN, ASSIGNOR TO QUAKER
SHADE ROLLER COMPANY, OF BAY CITY, MICHIGAN.

SHADE-ROLLER.

No. 812,134.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed October 9, 1905. Serial No. 282,011.

To all whom it may concern:

Be it known that I, WILLIAM D. JANES, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Shade-Rollers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improvement in shade-rollers, and relates more particularly to that part of a shade-roller in which is located the means for fastening the end of the shade-roller spring to the interior of the bore of the roller.

The objects of the improvement are to produce a smooth easy-running bearing for the end of the spindle about which the roller revolves when the shade is wound or unwound.

A further object is to prevent crushing of the hollow wooden bearing or "nose" that receives the end of the stationary spindle.

The improvement is illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of part of a shade-roller with my improvement attached. Fig. 2 is a part longitudinal section of the bung, spindle, and spring assembled. Fig. 3 is a perspective of the bung. Fig. 4 is a perspective of the bearing-cap, and Fig. 5 is an end view of the bung and cap assembled.

1 is the shade-roller, having the usual longitudinal bore 2, in which is secured the wooden plug or bung 3. A hole 3^b is formed in the bung to receive the end of the shade-roller spring 4, and upon the front end of the bung is formed a hollow cylindrical projection or nose 3^a, around the outer periphery of which the end of spring 4 is wound and into which is inserted the end of the stationary spindle 5. It has been found in practice that winding the spring tight in the operation of the shade-roller reduces the diameter of the spring and causes the end secured to the bung 3 to squeeze the nose 3^a and sometimes to crush in the wall of the nose and cause it to frictionally grip the end of the spindle to such an extent as to interfere with the operation and easy running of the roller. To over-

come this difficulty and to form a smooth bearing for the end of the spindle 5, I insert in the cylindrical nose 3^a a metal shell or cup 6. This cup is preferably formed of pressed metal and not only affords a smooth bearing for the end of the spindle, but also reinforces the walls of the nose 3^a and prevents its crushing in under the pressure of the spring. It will thus be seen that the inwardly-projecting end of the bung is provided with a hollow nose 3^a of less diameter preferably than the bung, the metallic cup 6 being seated in the nose to strengthen or reinforce the latter, and the adjacent end of the spindle 5 being received in the cup which forms a bearing therefor and permits the bung and roller to rotate about the spindle which remains substantially stationary, the cup preventing the crushing of the relatively weak wall of the nose by the force of contraction of the spring.

What I claim as my invention, and desire to secure by Letters Patent, is as follows:

1. The combination with a shade-roller spring and a spindle, of a bung having a reduced and recessed end; a metal cup inserted in the reduced and recessed end of said bung, to receive the spindle of the said shade-roller, substantially as described.

2. The combination in a shade-roller, with a spindle and a spring, of a bung fixed in the roller, a hollow support projecting from the bung and adapted to receive one end of the spindle, the spring surrounding the projecting support, and a strengthening means received within the projecting support to form a seat for the end of the spindle.

3. The combination with a shade-roller provided with a spindle, spring and bung, of a hollow nose carried by the bung and surrounded by the spring, the tendency of which spring is to compress the nose, one end of the spindle received in the hollow nose and a hollow reinforcing member seated in the nose and inclosing the end of the spindle, the member preventing a compression of the nose upon the end of the spindle.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM D. JANES.

Witnesses:

H. F. TIEDKE,
M. H. GREGG.