

No. 736,424.

PATENTED AUG. 18, 1903.

W. MUMBRAUER.
SHADE ROLLER.

APPLICATION FILED MAY 5, 1903.

NO MODEL.

FIG. 1.

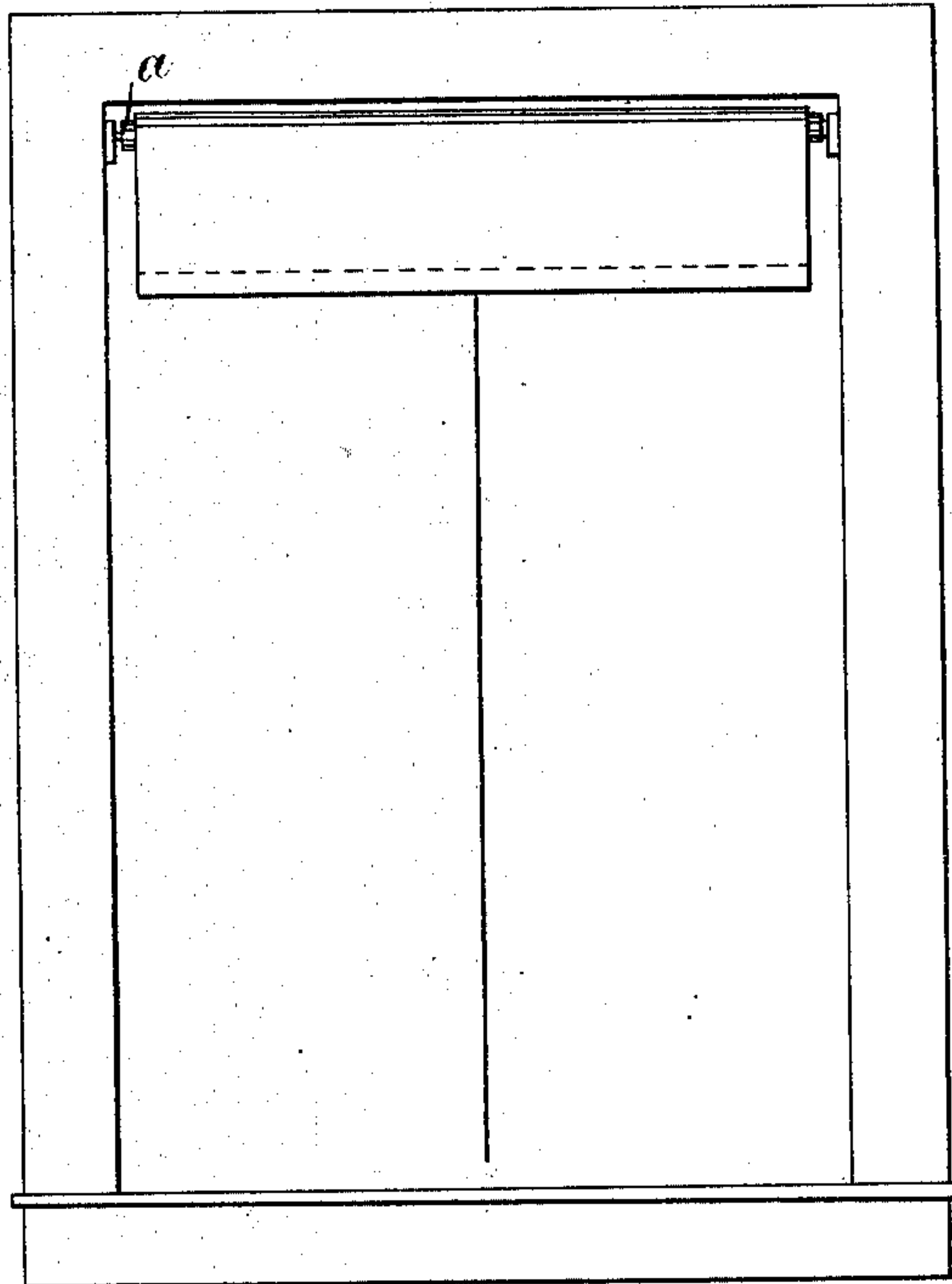


FIG. 2.

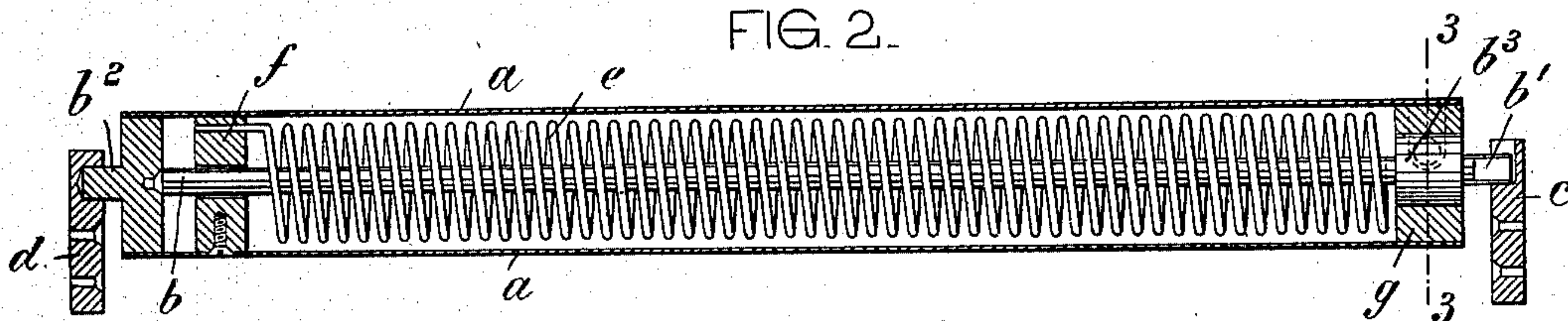


FIG. 5.

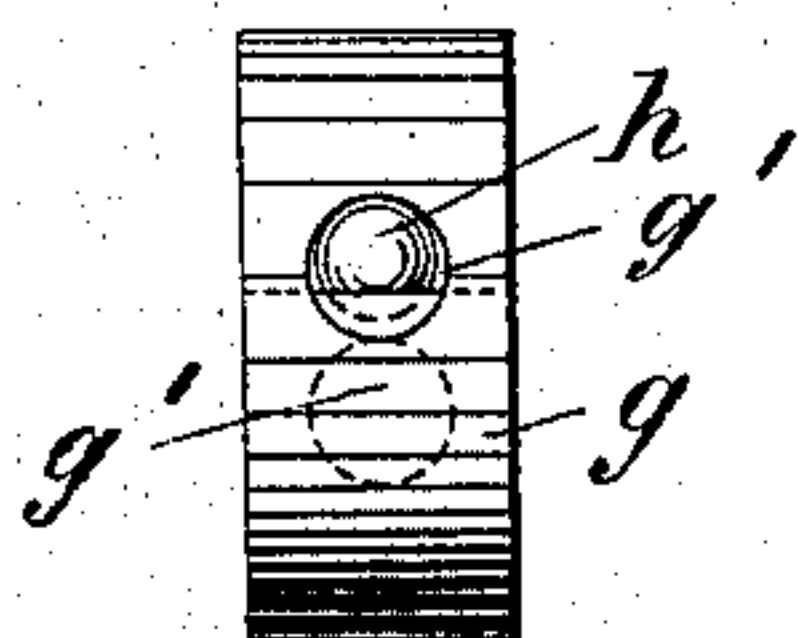


FIG. 3.

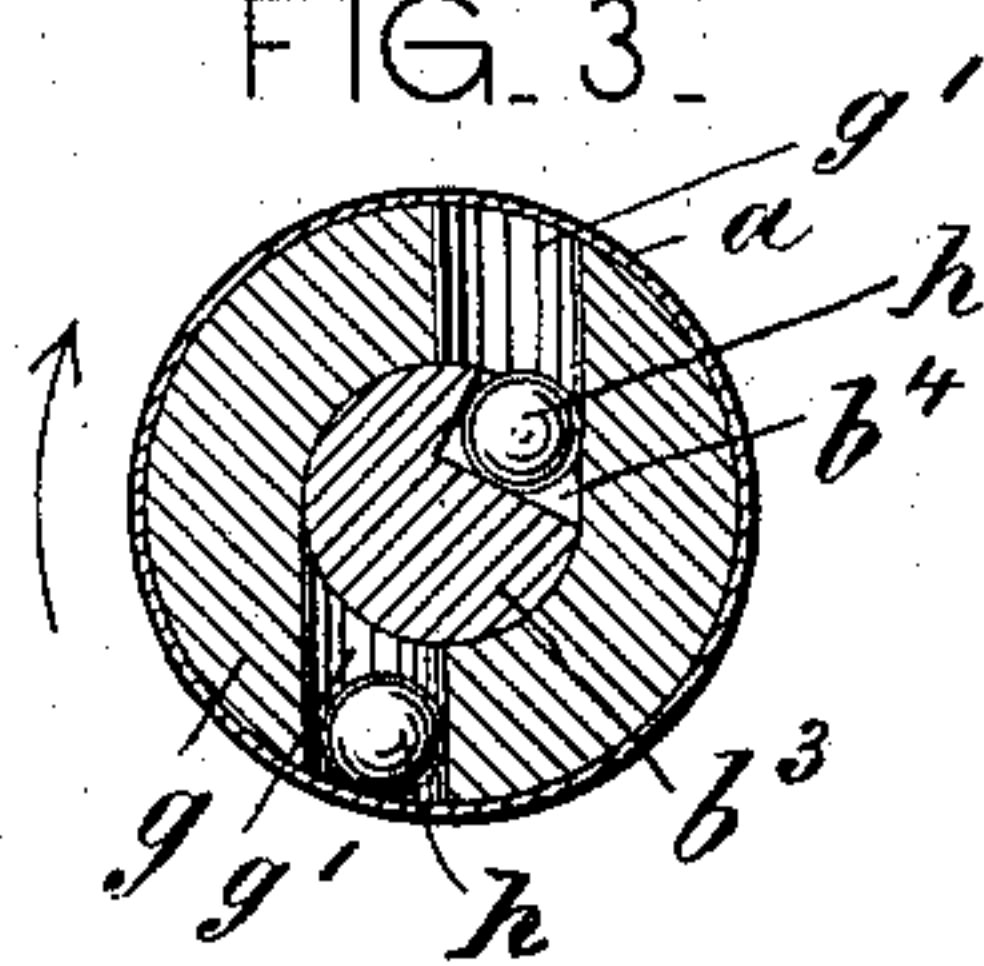
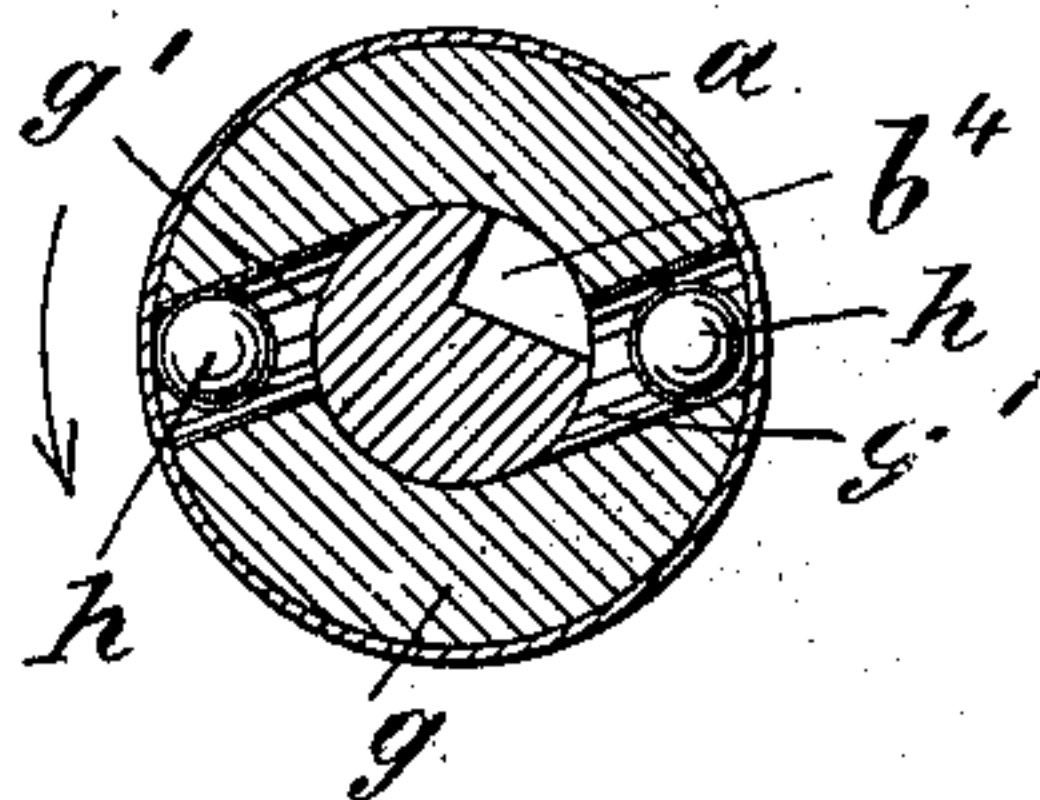


FIG. 4.



Witnesses:
Arthur J. Gump.
Edward Bay.

Inventor:
William Mumbrauer
by his attorney
Paul H. Briesen

UNITED STATES PATENT OFFICE.

WILLIAM MUMBRAUER, OF NEW YORK, N. Y.

SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 736,424, dated August 18, 1903.

Application filed May 5, 1903. Serial No. 155,699. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MUMBRAUER, a citizen of the United States, residing at New York city, (Bronx,) county and State of New York, have invented certain new and useful Improvements in Shade-Rollers, of which the following is a specification.

This invention relates to a shade-roller which is so constructed that its operative parts are thoroughly protected, will work freely, and are not liable to come out of order.

In the accompanying drawings, Figure 1 is a front view of a window-frame provided with my improved shade-roller. Fig. 2 is a longitudinal section through the roller; Fig. 3, an enlarged cross-section on line 3-3, Fig. 2; Fig. 4, a similar cross-section showing the parts in a different position, and Fig. 5 a top view of the perforated disk.

The letter *a* represents the tubular rotatable shell of a shade-roller, through which passes axially the fixed spindle *b*, having a squared end *b'*, which is received by one of the brackets *c*. A round gudgeon *b²* on the opposite end of the shell *a* is free to rotate within the second bracket *d*. A spring *e* is secured at one end to the spindle *b* and at the other end to the shell *a* by means of a perforated disk *f*, so that the spring will be wound up in the well-known manner by drawing the shade down. The spindle *b* is provided with in the tube *a* with an enlargement or collar *b³*, having a rectangular groove *b⁴*. This groove is arranged sidewise from the vertical axis of the collar, and its upright edge as well as its base are inclined. The collar *b³* is embraced by an annular disk *g*, fast within shell *a*. This disk is provided with preferably two outwardly-extending straight eccentric ducts or perforations *g'*, which are open at their inner ends and contain balls *h*. The ducts *g'* constitute ball-races, which when brought into alinement with the groove *b⁴* deliver the

ball to said groove and cause the latter to lock the disk, and consequently the shell *a*, to the spindle.

When the shade is drawn down, the ball will roll down along the inclined base of groove *b⁴* by gravity and will thus enter the duct *g'* without occasioning a jar. The ball after having thus cleared the groove will travel freely around the collar *b³* in the direction of the arrow, Fig. 3. If the shade is slowly released, the spring *e* will rotate the shell *a* slightly backward until one of the channels *g'* is brought opposite the groove *b⁴*, when the ball *h* will roll into said groove and be clamped between the outer wall of the duct and the inclined overhanging edge of the groove. Thus the ball is securely locked against displacement. On pulling the shade down and then releasing it suddenly the balls will be thrown outward by centrifugal action, so as to clear the groove *b⁴*, Fig. 4, and thus the shade may be raised to the position desired.

It will be seen that by my invention a coupling is formed between the spindle and the shell which is thoroughly protected, permits a ready manipulation of the shade, and is not liable to come out of order by the usual wear or strain.

What I claim is—

In a shade-roller, a rotatable spring-influenced shell combined with an inclosed disk having a straight eccentric duct, a ball in said duct, and a fixed spindle having a laterally-arranged groove with an inclined upper edge adapted to overhang said ball, substantially as specified.

Signed by me at New York city, (Manhattan,) New York, this 4th day of May, 1903.

WILLIAM MUMBRAUER.

Witnesses:

FRANK V. BRIESEN,
EDUARD RAY.