

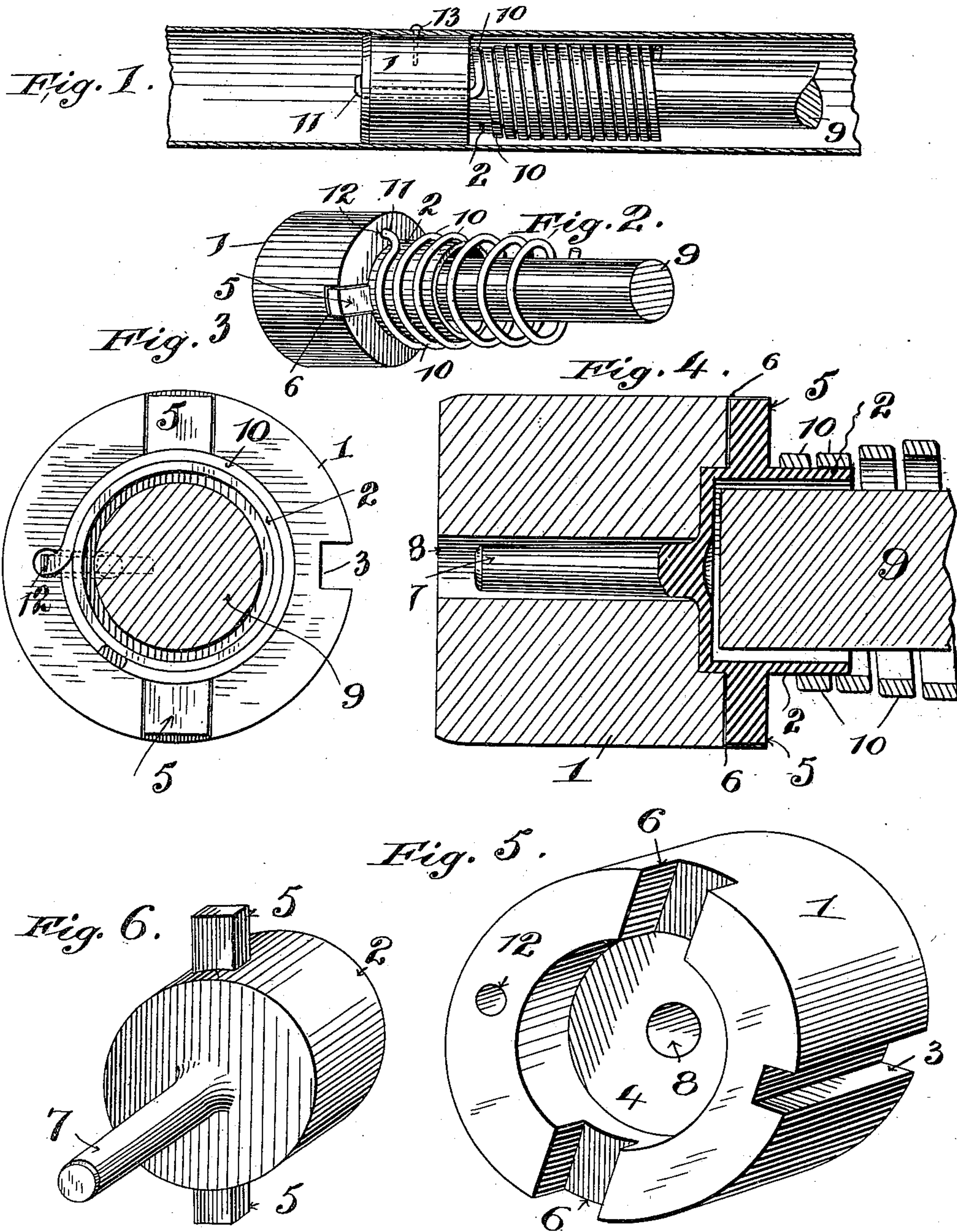
No. 662,148.

Patented Nov. 20, 1900.

E. F. HARTSHORN.  
SPRING SHADE ROLLER.

(Application filed June 22, 1900.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## SPRING SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 662,148, dated November 20, 1900.

Application filed June 22, 1900. Serial No. 21,139. (No model.)

*To all whom it may concern:*

Be it known that I, EDMUND F. HARTSHORN, a citizen of the United States of America, and a resident of Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Spring Shade-Rollers, of which the following is a specification.

This improvement relates to the inner support or bearing for the spindle within the roller, and refers to that construction of roller in which the inner end of the spring on the spindle is attached to the roller or to the spindle-support, or "bung," as it is termed, and particularly to rollers formed of tin or similar metal; and the invention consists in the constructions and combinations contained in the claims herein.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of the spindle and spindle-supporting bung and spring attached thereto in place in the interior of the roller. Fig. 2 is a perspective view of the spindle, bung, and spring. Fig. 3 is an end view, partly in section, of the bung and end of the spindle resting in the same. Fig. 4 is a side sectional view of the bung, spindle, and spring. Fig. 5 is a perspective view of the end of the wooden portion of the bung, and Fig. 6 is a perspective view of the engaging or inner end of the metal part of the bung.

This improvement has for its object the providing a bung or support for the inner end of the spindle capable of withstanding the pressure of the spring caused by the tightening of its end coils around the outside of the bung when the spring is wound up in the operation of the roller.

The bung or spindle-support in this improvement is formed in two parts—a wooden portion or block 1 and a metal cup or bearing 2, which fits in and engages with the wooden part 1. This block or wooden portion of the bung is made of a diameter to slide easily within the roller and is provided with the groove 3 to accommodate the usual shade-attaching groove formed in the side of the tin roller. In a circular recess 4 in one end of the block rests the cup or metal part 2 of the bung. On the outer circumference

of this metal part of the bung are studs 5, which fit in recesses 6 in the block and serve to prevent the metal cup turning in the latter. On the inner end of the cup is a long prong or spur 7, which enters a hole 8 in the block and keeps the cup from canting side-wise and holds the latter steady in the wooden block 1. The bottom of the cup and the studs 5 should fit their respective recesses tightly, whereby the block and cup are securely held together, and cannot become separated from each other by any manipulation of the roller.

The end of the spring-bearing spindle 9 rests in the metal cup 2 and the end 11 of the spring is attached to the wooden block by being passed through the hole 12 in the latter and bent back or against the opposite face of the block, as shown in Fig. 1. The diameter of the cup should exceed that of the spindle, so that the latter will rest loosely in the cup, and the cup can thus revolve around the spindle without affecting the latter. As will be seen from Fig. 4, the end coils 10 of the spring pass around the outside of the cup or metal part of the bung, and hence as these coils are tightened by the winding up of the spring they press or hug close against this metal ring or bearing, which is capable of resisting their pressure, and all tendency to crush or break the outside of the cup and all danger of pressing the latter against the spindle are avoided.

The parts are assembled and connected with the roller as follows: The metal cup 2 having been secured to the wooden block, as described above, the end of the spindle bearing the spring is placed in the cup and the end of the spring passed through the hole 12 in the block and fastened to the latter. The bung, together with the spindle and spring, is then inserted in the roller and pushed along within the latter until at the point desired, when it is fastened in place and connected with the roller by a nail or screw 13 driven into the wooden block from the outside of the roller.

As will be seen in this improvement, the coils of the spring, which are drawn tight by the winding up of the spring, are received by a firm metal bearing on the bung and the lat-



ter cannot break down or be pressed against the spindle, thus securing a perfect operation of the roller.

I do not wish to confine myself to the particular construction shown and described above, as the construction may be varied without departing from the spirit of my invention, and it is evident that the end of the spring may be attached directly to the roller, if desired, and may be fastened to the bung in any other manner than that shown.

What I claim is—

1. In a spring shade-roller, a bung for the end of the spindle, consisting of a hollow metal cup, having a bottom and sides, within which the end of the spindle rests, and adapted to sustain the coils of the spring; and a wooden block arranged and adapted to receive and hold the metal cup, substantially as described.

2. In a spring shade-roller, a bung for the end of the spindle, consisting of the metal cup 2 having the studs 5 and prongs 7, and adapted to receive the end of the spindle and sustain the end coils of the spring, and the wooden block 1 provided with a central hole

and side recesses to receive and engage with the prong 7 and studs 5, and adapted to receive and hold the cup 2, substantially as described.

3. In a spring shade-roller, in combination, a hollow metal cup having a bottom and sides, adapted to hold the end of the spindle and sustain the coils of the spring; a wooden block arranged to receive the cup and be secured within the roller; spring-bearing spindle resting on the bottom of the cup; and spring having its end coils encircling the outside of the cup, substantially as described.

4. In a spring shade-roller, in combination, the hollow metal cup 2, having a bottom and sides; wooden block 1 secured within the roller, adapted to secure and hold the cup; spindle 9 resting on the bottom of the cup; and spring 10 encircling the outside of the cup, and attached to the block 1, substantially as described.

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Witnesses:

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