No. 764,516. PATENTED JULY 5, 1904.

B. F. BELL.

SHADE ROLLER ATTACHMENT.

APPLICATION FILED APR. 22, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

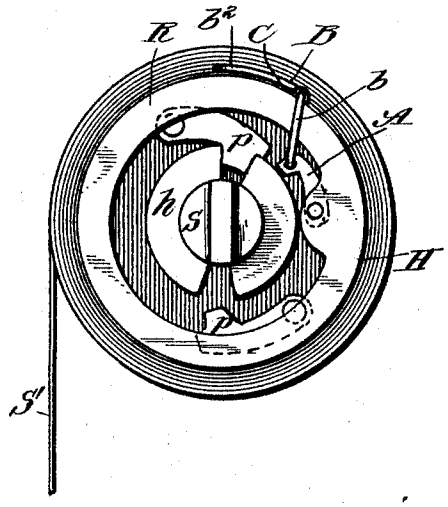


Fig. 2.

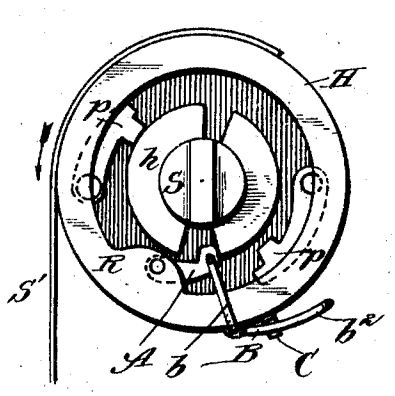
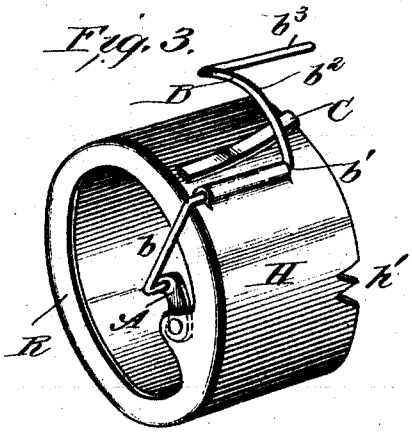


Fig. 3.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

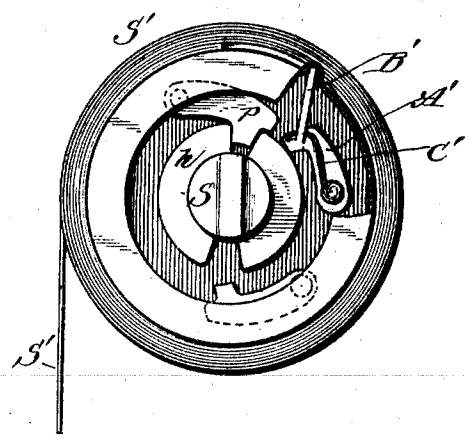
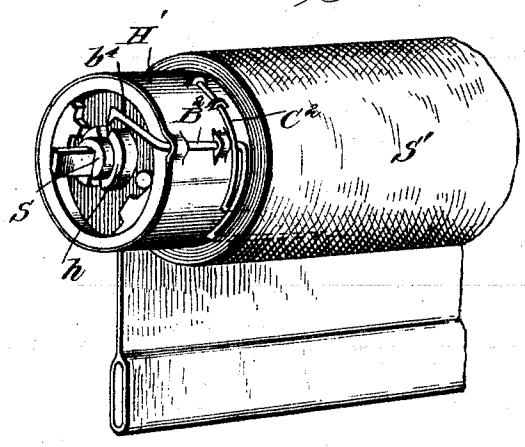


Fig. 5.



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UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN BELL, OF NASHVILLE, TENNESSEE, ASSIGNOR OF TWO-THIRDS TO ARTHUR H. GOSSLING AND HENRY TEITLEBAUM, OF NASHVILLE, TENNESSEE.

SHADE-ROLLER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 764,516, dated July 5, 1904.

Application filed April 22, 1904. Serial No. 204,390. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN FRANKLIN BELL, a citizen of the United States, and a resident of Nashville, in the county of Davidson and State of Tennessee, have made certain new and useful Improvements in Shade-Roller Attachments, of which the following is a specification.

My invention is in the nature of an attachment for shade-rollers, preferably those of the Hartshorn type—that is to say, rollers in which a hidden spring is wound up by unrolling the shade and is retained so wound up by a pawl or detent engaging the spindle on which the roller proper is mounted.

The invention is, further, an improvement in that class of attachments which are designed to prevent the complete unwinding of the shade from the roller, so that the shade will not be likely to be torn or forcibly detached from the roller.

The details of construction, arrangement, and operation of the attachment are as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is an end view of a roller provided with my attachment, the shade being wound upon the roller proper and my improved locking attachment being therefore held out of action. Fig. 2 is an end view of the same parts, the shade being unwound and my attachment in the locking position. Fig. 3 is a perspective view of the attachment as a whole detached from the roller proper. Fig. 4 is an end view of a roller provided with a modified form of my attachment, the curtain being shown wound on the roller proper and the locking device therefor held out of action. Fig. 5 is a perspective view representing another modification.

I will first describe the invention as illustrated in Figs. 1, 2, 3. R indicates a roller, preferably of the Hartshorn type; S, the rotatable spindle thereof; h, the notched hub thereof; p, the ordinary locking-pawls of such rollers, and S a shade adapted to be rolled upon the roller proper, as shown in Fig. 1. In this form of my invention the attachment comprises a cylindrical metal head H, adapted to be applied to the end of the roller and having one or more prongs h', which may be bent inward to hold the head firmly in position on the roller. The outer end of said head has an inward-bent flange h^2, to which a locking-pawl A is pivoted. This pawl is adapted to engage notches in the hub h of the rotary spindle in the same manner as the ordinary locking-pawls p, before referred to. An actuating device in the nature of a crank B is connected with the said pawl and serves to hold the same out of action, as in Fig. 1, when the shade is rolled on the roller. The device B is constructed of wire and has three right-angular bends to adapt it for its position and function. The several parts of the multiple crank thus formed are the following: b indicates the arm, which is pivotally connected with the pawl A; b', the portion which is pivoted or hinged on the head H parallel thereto; b^2, an arm extending in the direction of the curvature of the roller, and b^3 a lateral arm which extends parallel to the axis of the roller. A spring C is arranged beneath the curved arm b^2 and serves to normally hold it elevated or thrown out from the body of the roller, as shown in Figs. 2 and 3, in which position the pawl A engages the hub h of the spindle S.

It will be seen that the crank B is so constructed that the pawl A will be thrown out or disengaged from the notched hub when the outer arm b^2 b^3 is held down upon the roller, as indicated in Fig. 1. This is done by the shade S when wound upon the roller, as shown in said figure. The shade is attached to the roller at such point that the first complete wind or convolution of the same passes over the lateral arm b^3 of the crank B, and thus the pawl A is thrown out and held out of engagement with the hub. It is apparent that when the shade is drawn off from the roller to the extent that the lateral arm b^3 of the crank B is held free, as in Fig. 2, the spring C will instantly throw the crank-arm outward, whereby the pawl A will be thrust inward and caused to engage the notched hub,

so as to prevent further rotation of the roller. Hence the shade S can never be unwound from the roller further than illustrated in Fig. 2, and consequently the shade is not liable to be torn off from the roller, as so often happens when attached in the usual way to a roller unprovided with an attachment of this character.

It will be seen that my improved attachment as illustrated in Fig. 3 may be made and sold as a separate article and may be applied to rollers already in use.

In Fig. 4 I illustrate a modification, in which I employ a double crank B′, as before, but instead of applying the spring directly to said crank I apply it to the pawl itself. C′ indicates the spring, which is formed of wire and properly attached to the pivot of the pawl A′. It will be seen that the pawl also is pivoted to a plate on the end of the roller instead of being directly connected with the casing of the roller.

In Fig. 5 I show another modification, in which the crank B^2 is so constructed that its inner end b^4 is itself adapted to serve as a pawl, and to engage the notched hub h of the spindle S. In this instance the spring is arranged on the casing or head H′, attached to the head of the roller, and is arranged practically concentric with the latter instead of extending longitudinally thereof, as shown in Figs. 1, 2, and 3. It will be seen that the attachment shown in Fig. 5 may be made and sold as an entirety and may thus be applied to a roller of the usual type in the same manner as the attachment illustrated in Figs. 1 to 3.

What I claim is—

1. The combination, with a shade-roller proper and a spindle therefor provided with a notched hub, of a spring-actuated locking attachment consisting of a rocking crank which is pivoted and adapted to engage the said hub, its outer arm extending on the portion of the roller where the shade is rolled, the arrangement being as described, whereby, when the shade is wound on the roller, the locking means is held out of engagement with the hub, substantially as described.

2. The combination, with a shade-roller proper and spindle therefor, and a notched hub, of the spring-actuated locking attachment consisting of a rocking crank which is pivoted on the roller, one of its arms projecting inward on the end of the roller and provided with a hook whereby it is adapted to serve as a latch-pawl by engaging the said hub, and the other arm extended on that portion of the roller where the shade is rolled, the respective arms of the crank being so arranged, that, when the shade is wound on the roller proper, the pawl-arm is held out of engagement with the hub substantially as described.

3. The combination, with a roller having a rotary spring-actuated spindle provided with a notched hub, of a locking attachment comprising a casing or head adapted to be secured to the end of the roller, and a locking device proper pivoted on said head and adapted to engage the hub, and a spring for actuating the said device, the latter being so arranged that when a shade is wound on the roller the locking portion is held out of action, substantially as described.

4. As an improved article of manufacture, the shade-roller attachment comprising a head adapted to be applied to the end of a roller, and a locking device pivotally attached to said head and a spring for actuating the same, the arrangement being such that when the portion of the device which is parallel to the head is pressed inward the locking portion is held out of action, substantially as described.

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Witnesses:
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