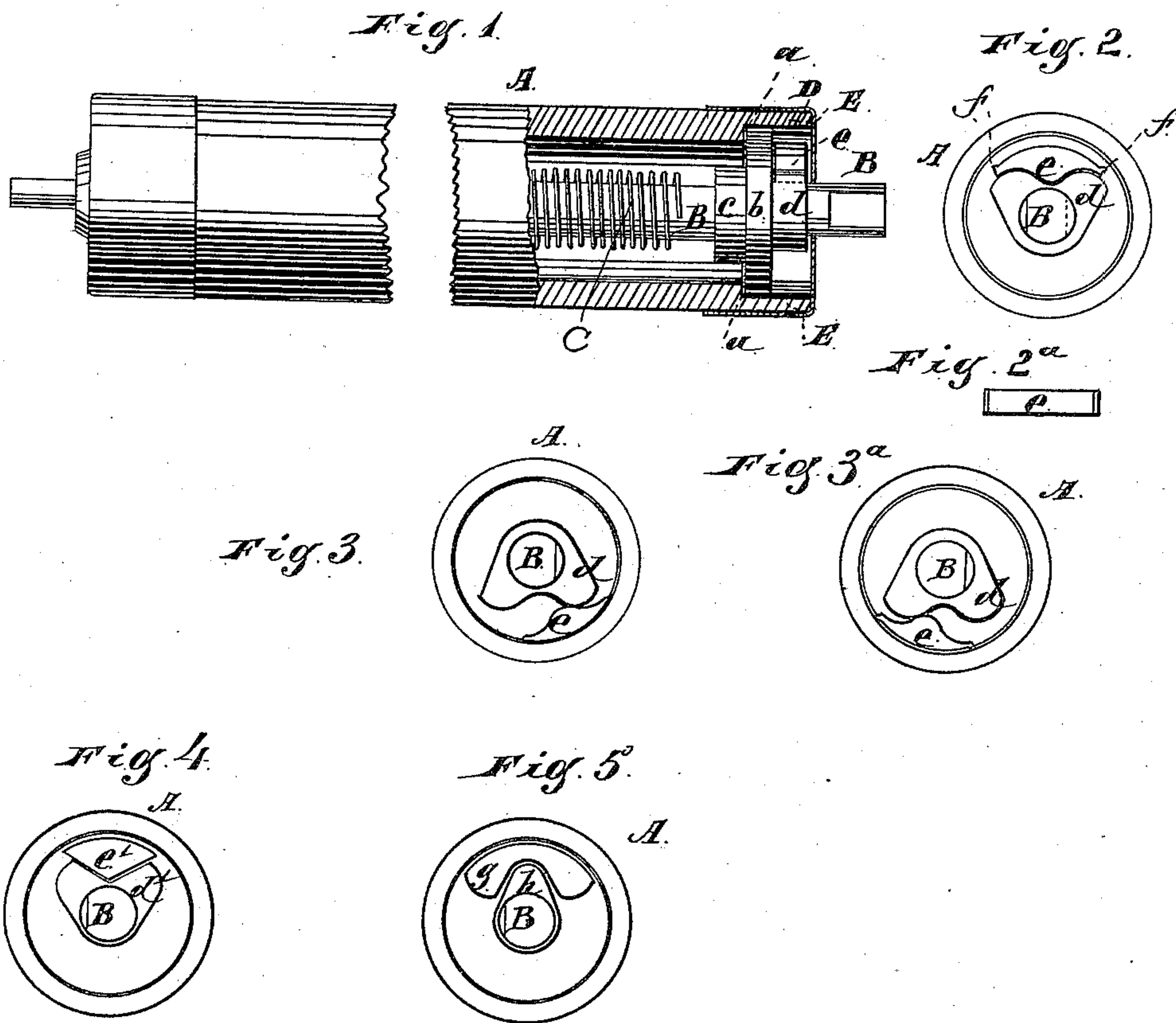


(No Model.)

J. C. LAKE.
SPRING SHADE ROLLER.

No. 310,595.

Patented Jan. 13, 1885.



Witnesses:
Albert H. Adams.
B. A. Price.

Inventor:
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UNITED STATES PATENT OFFICE.

J. CHRISTOPHER LAKE, OF AURORA, ILLINOIS.

SPRING SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 310,595, dated January 13, 1885.

Application filed May 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, J. CHRISTOPHER LAKE, residing at Aurora, in the county of Kane and State of Illinois, and a citizen of the United States, have invented new and useful Improvements in Spring Shade-Rollers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, some parts being shown in section. Fig. 2 is an end view; Fig. 2^a, a detail; Fig. 3, the same as Fig. 2, except that the position of the parts is changed. Fig. 3^a represents the parts shown in Fig. 3 in a different position. Figs. 4 and 5 are modifications of the double-acting lock.

The object of my improvement is to provide a spring shade-roller with a lock having an extended bearing-surface, which I accomplish by the mechanism illustrated in the accompanying drawings, in which—

A represents an ordinary shade-roller; B, the spindle at one end, which may be made partly of wood and partly of metal; C, a spring secured to the roller and spindle, as usual.

a is a shoulder upon the inside of the roller.

b is a collar rigidly secured to the spindle, arranged to come in contact with the shoulder *a*.

c is a hub upon one side of the collar *b*.

d is a projection from and upon the other side of the collar *b*, which projection may be of the form shown in Figs. 1 and 2.

I make the parts *b c d* together, casting them from suitable metal.

e is a loose locking-piece, having an extended bearing-surface upon the outside, its under side being formed so as to fit into the depression or recess in the part *d*, as shown in Fig. 2. As shown, the locking-piece *e* has at each end of its upper surface a little rise or projection, *f*.

D is a cap over the end of the roller. The end of the roller which receives the spring is bored out, as usual, and the extreme end E may be regarded as a flange.

In Fig. 4 *d'* corresponds with *d* in Fig. 2, but the depression or recess therein is angular instead of curved; and *e'* corresponds with the part *e*, but it is formed so as to fit into the depression in *d'*.

In Fig. 5 I have shown a modification, in which the part *g*, which takes the place of the lock *e* in Fig. 2, is recessed on its under side, and the spindle is provided with a projecting part, *h*, which enters such recess in *g*.

The operation is as follows: It is sometimes necessary to remove the roller from its supporting-brackets, in which case the spring will be unwound, unless a lock be provided. This result is accomplished by my device in the manner shown in Fig. 3; but I have provided a lock having an extended bearing-surface, which comes in contact with the inside or flange portion of the roller, preventing wearing and injury to the roller, and providing a secure and efficient lock. Sometimes the shade is put upon the wrong side of the roller, or the roller is put into its brackets wrong side up, and then the spring is liable to be injured by turning it in the wrong direction.

With the device constructed as shown in Fig. 2, if the roller be operated in the wrong direction, no injury can result, because the parts will be locked, as shown in Fig. 3^a.

The operation of the devices, when made as shown in Figs. 4 and 5, is substantially the same as when made as shown in Fig. 2, in all of which a double-acting lock having an extended bearing-surface is shown. This lock does not interfere with the operation of the roller when it is placed in its brackets in the proper position, as shown in Figs. 1 and 2.

The loose piece described and the fixed part upon the spindle which engages therewith are so formed that when the spindle comes into certain positions the loose piece will be forced by the fixed piece into contact with the interior of the flange at the end of the roller, as indicated in Figs. 3, 3^a. By providing the loose piece with points on the bearing-surface, it will catch more readily and be less likely to slip.

I am aware that the spindles of shade-rollers have been provided with one or more cams, in connection with one or more balls or short rollers, for the purpose of locking the spindle, and I do not claim such construction.

The distinguishing feature of my invention consists in providing a loose piece, having a long bearing-surface, adapted to be forced into

contact with the interior of the roller by a fixed piece upon the spindle, as fully shown and described.

What I claim as new, and desire to secure
5 by Letters Patent, is as follows:

In a spring shade-roller, the combination,
with a flange thereon, and a fixed piece on the
spindle, of a loose double-acting locking-piece,
having on one side an extended bearing-sur-
10 face, and an irregular surface on the other side

adapted to engage with the fixed piece and
by the same be moved into contact with said
flange in either of two directions in which the
roller may be turned, substantially as de-
scribed.

J. CHRISTOPHER LAKE.

Witnesses:

B. A. PRICE,

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