(Model.)

2 Sheets—Sheet 1.

J. B. FINCH.

SPRING ROLLER FOR CURTAIN FIXTURES.

No. 291,502. Patented Jan. 8, 1884.

Fig. 1.

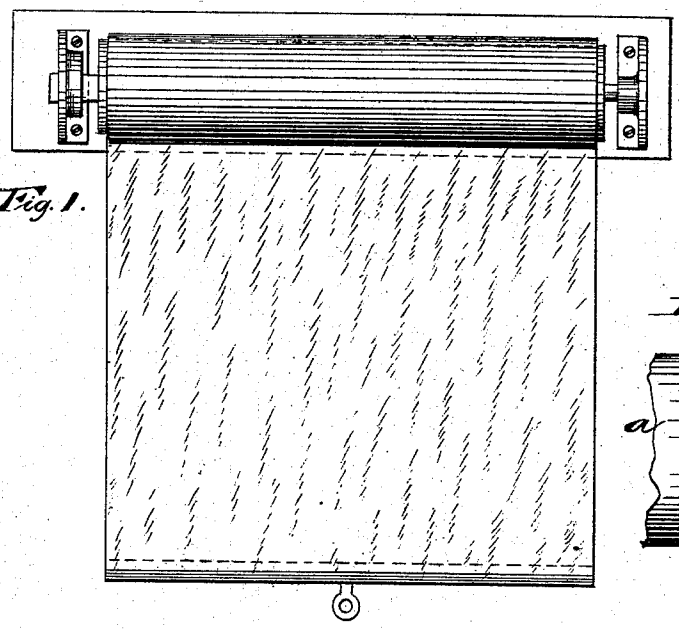


Fig. 9.

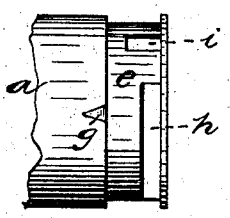


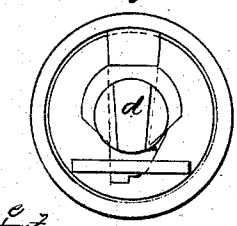


Fig. 4.

Fig. 3.



Fig. 2.



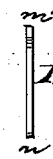


Fig. 5.

Fig. 6.

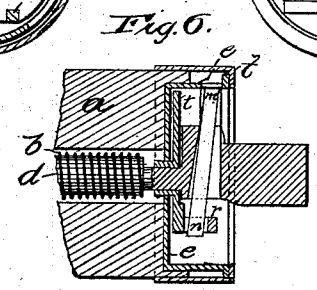


Fig. 7.

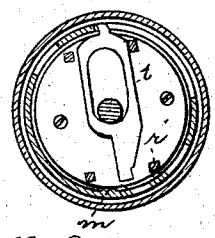
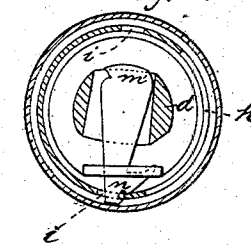


Fig. 8.



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(Model.) 2 Sheets—Sheet 2

J. B. FINCH.

SPRING ROLLER FOR CURTAIN FIXTURES.

No. 291,502. Patented Jan. 8, 1884.

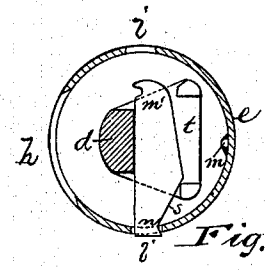


Fig. 10.

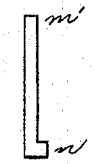


Fig. 12

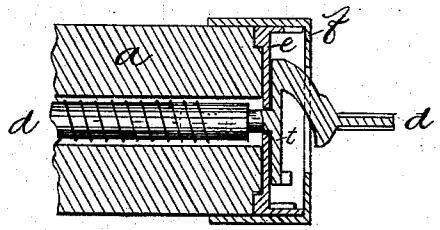


Fig. 11.

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UNITED STATES PATENT OFFICE.

JAMES B. FINCH, OF NEWARK, NEW JERSEY.

SPRING-ROLLER FOR CURTAIN-FIXTURES.

SPECIFICATION forming part of Letters Patent No. 291,502, dated January 8, 1884.

Application filed April 23, 1883. (Model.)

To all whom it may concern:

Be it known that I, JAMES B. FINCH, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Spring-Rollers for Curtain-Fixtures; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to prevent a spring-actuated curtain from rolling entirely up when, in the process of raising it or of drawing the same down, it accidentally slips from the manipulator's hand, which action on the part of said curtain has heretofore made it necessary to climb to within reach thereof to gain access to it and draw it to its required position—a process involving considerable trouble.

The invention consists in the arrangements and combinations of parts, as will be hereinafter set forth, and finally embodied in the claims.

Referring to the accompanying drawings, embodied in two sheets, in which similar letters of reference indicate like parts in each of the several figures, Figure 1 is an elevation of a curtain arranged in connection with a spring-actuated roll. Fig. 2 is an end view of a roller, showing certain detaining mechanism. Fig. 3 is a sectional view, showing the same more clearly. Figs. 4 and 5 are respectively a plan and edge view of a compound detent, or two detents united. Fig. 6 is a vertical longitudinal section of a portion of the roll, showing the actuating and detaining mechanism. Fig. 7 shows a modified form of my improvements. Fig. 8 illustrates my device when the detention of the roll has been occasioned by a slow movement of the curtain, and Fig. 9 illustrates in detail a box carrying certain abutments for the detent. On Sheet 2, Figs. 10, 11, and 12 illustrate, respectively, a side view of a box, containing modified forms of the detaining mechanism, a section of the end of a roller containing the same, and an edge view of a detent.

In carrying out my invention, I construct the roller proper, *a*, having a spring-chamber therein, and carrying a spring, *b*, and spindle *d*, in any ordinary manner, and on the end of the roll is secured, by means of a ferrule, *f*, a box, *e*, which is caused to revolve with the curtain-roll by means of any suitable mechanism, such as the projections *g*, Fig. 9, which are thrust into the end of said roller. Said box *e* is provided with suitable abutments for the detent, as will be set forth. Within said box is arranged suitable detaining mechanism adapted to detain the curtain when the same is being rolled up either slowly or rapidly. Said detaining mechanism consists in a sliding compound detent, *m' n*, arranged to work either around the spindle *d*, as shown in Fig. 7, through the same, as in Figs. 2, 3, and 6, at one side of the spindle, as in Fig. 11, or otherwise, the last particularized arrangement being, from its simplicity, preferred. Said detent is constructed to engage at either of its ends with abutments or holding-surfaces on the box *e*, which abutments may be formed by cutting or making slots *h i* in the wall of the box, *h* being to co-operate with the upper extremity of the detent, and *i* to receive the lower extremity, *n*. Said slot and detent are so arranged as that the lower extremity of said detent will not fall into the slot *h*, (or otherwise engage with the abutment for the upper detent,) but will be inoperative in its relation thereto. This is effected by arranging the extremities of said detent out of a vertical line, as shown in Fig. 6, or it may be attained in any other way. On a slow upward movement of a hanging curtain, occasioned by the recoil of the spring *b*, the lower extremity of the detent gravitates into one of the openings *i*, and is held by engagement with the abutment thereof. When the curtain is again lowered, an incline, *s*, on the detent strikes a lug, projection, or, as in the case illustrated by Figs. 2 and 3, a side portion of a staple or loop, *r*, said lug, staple, or projection being arranged on a plate or portion, *t*, secured to, arranged on, or which is integral with the spindle. The engagement of the lug or loop *r* with the inclined portion of the detent causes the latter to rise when the perforated or slotted box throws said detent toward said lug or projection, as will be understood. A more rapid

upward movement of the curtain caused by a moderately-quick revolution of the roll is not hindered or prevented by portion or detent *n* entering the slot *i*, as said detent will not have sufficient time to make a holding-engagement. A quick revolution of the roll, caused when the action of the spring is not trammeled by the weight of the hand, as when the curtain slips from said hand and tends to fly to the top of the window, is immediately checked by mechanism, as follows: Upon the inner surface of the box slightly projects a lug, *m*, which in its passage with the roller strikes the lower extremity of the detent, throwing it up into the longer slot *h*, and causes it to engage with the abutment therein before said detent can again fall. By drawing the curtain with the hand, said detent will, by its own weight, fall and allow a moderate upward movement of the curtain.

It will be observed that my device provides mechanism for checking slow revolution of the curtain-roll, and, in addition, other mechanism for checking quick revolution, moderate revolution being unobstructed; but as I am aware that the same results can be obtained by considerably modifying the construction shown and particularly described—as, for example, making the combined detents herein shown in separate and independent pieces—I do not wish to be understood as limiting myself thereto.

Having thus described my invention, what I claim as new is—

1. In combination, the spring-actuated curtain-roll, the compound detent having the incline *s*, the box *e*, having abutments for said detent, and an inwardly-projecting lug, *m*, the plate *t*, and projection *r*, all arranged and operating substantially as herein set forth and shown.

2. In combination, the spring-actuated curtain-roller, carrying the box *e*, having the slots *h i*, with inwardly-projecting lug *m*, the detent *m' n*, having the incline *s*, and lug or projection *r*, all being arranged and operating substantially as and for the purpose herein set forth and shown.

3. In combination, in a spring-actuated curtain-roll, the box having the lug *m*, adapted to throw the sliding detent into engagement with an abutment on said box, and having an abutment to receive said detent when said box is revolving at a slow rate of speed, and a sliding detent having its opposite extremities free to engage with said abutments and lug, substantially as set forth and shown.

4. In combination, the box having the slots *h i* and lug *m*, and the sliding detent, all arranged and operating substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of March, 1883.

JAMES B. FINCH.

Witnesses:
CHARLES H. PELL,
JOSIAH ALLEN.