(No Model.)

S. ARMSTRONG.

CURTAIN ROLLER.

No. 303,355. Patented Aug. 12, 1884.

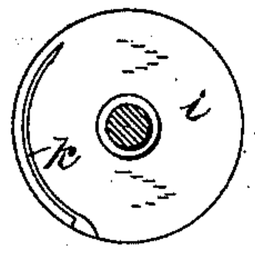
Fig. 3.

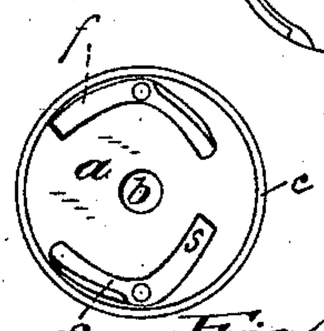
Fig. 4.

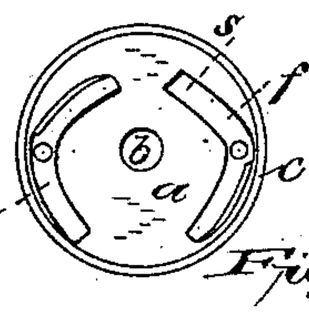
Fig. 5.

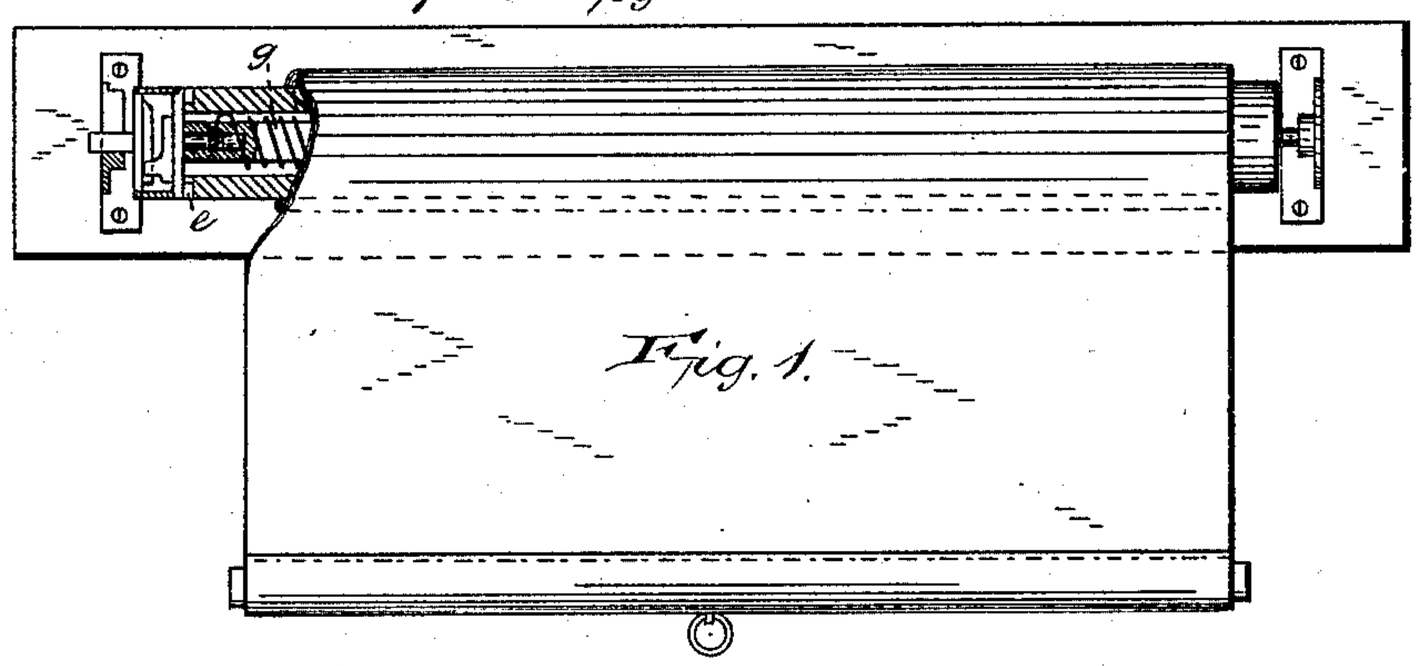
Fig. 1.

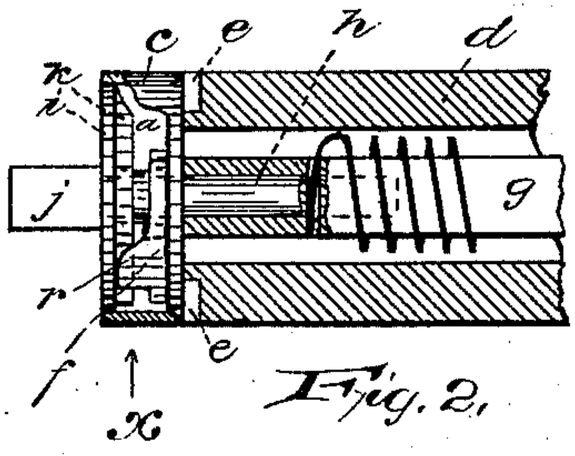
Fig. 2.


Fig. 7.

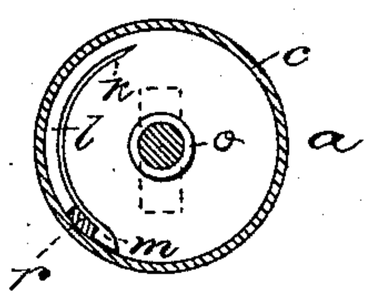
Fig. 6.

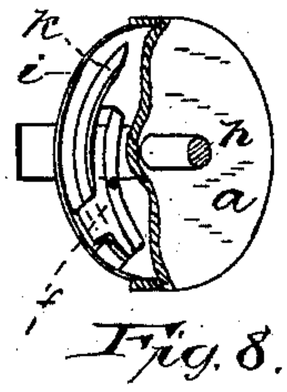
Fig. 8.

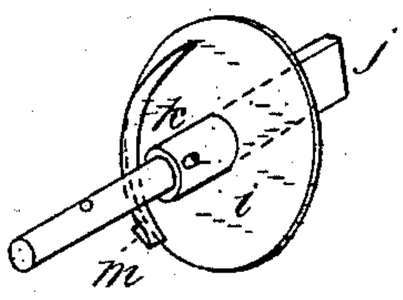
Fig. 9.

Attest:

F. F. Campbell.
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Attys.

UNITED STATES PATENT OFFICE.

SAMUEL ARMSTRONG, OF NEWARK, NEW JERSEY.

CURTAIN-ROLLER.

SPECIFICATION forming part of Letters Patent No. 303,355, dated August 12, 1884.

Application filed January 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL ARMSTRONG, 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 Curtain-Rollers; 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.

This invention relates to that class of spring-actuated curtain-rollers having at one end thereof a box provided with a pawl and detent adapted to stop the revolution of the roller. The object is to reduce the noise occasioned by the pawl; to provide a device not liable to become accidentally unfastened; to reduce the cost of construction, and to prevent the spring of the roller from being unwound when once arranged in the roller for the market.

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

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a front view of a curtain and its fixtures, partially in section, to illustrate the construction of the latter. Fig. 2 is a section of a portion of the curtain-roller and the box thereon, illustrating the relation of the parts thereof. Fig. 3 is a plan of the inner face of a spindle-plate, which, when in position on the bracket, is stationary therewith. Figs. 4 and 5 are plans of the boxes that revolve with the rollers, the figures showing different positions of the pawl. Fig. 6 is a sectional view of the box and pawl, taken through line *x*, Fig. 2. Fig. 7 is a perspective view of the pawl; Fig. 8, a perspective view of the box and spindle-plate in combination, the former being broken away to show the pawl in engagement with the stop; and Fig. 9 is a perspective view of the spindle-plate.

In carrying out the invention I form a box, *a*, having a spindle-perforation, *b*, therein, and a rim, *c*, forming the annular sides of the box, and secure the same to the roller *d*, suitable lugs, *e*, being provided to cause the roller and box to revolve together. Within said box are pivoted pawls *f*, of peculiar construction and operation, which will be subsequently described.

Within and through the box, engaging with the spring-rod *g*, is arranged a spindle, *h*, having cast thereon a plate, *i*, which fits into the rim of the box and entirely closes the same to prevent access of dust and improper manipulation of the pawls prior to the arrangement of the device in the brackets. The interior side of the spindle-plate *i*, or the side opposite the angular portion *j* of the spindle, has formed thereon, in a position near and concentric to the periphery of the said plate, an inwardly-projecting curved ridge, *k*, between which and the rim of the box a narrow passage, *l*, is formed. Said ridge has a stop, *m*, at one of its ends, which closes the passage, as shown in Fig. 6. The ridge has more or less length from the stop-piece, so that when the pawl is released from hard bearing thereon it will not drop, and thus allow the spring to unwind indefinitely, but will require a positive backward pull of considerable length before the pawl is freed from its position in the passage. The curved ridge is arranged in an approximately-vertical position in the bracket, as shown, the opening *k* to the passage being forward of a vertical line drawn through the spindle. The pawls *f* are pivoted to the roller-box *a*, and are provided with lugs *r*, to enter the passage *l* and engage with the stop *m*. They are also weighted, as at *s*, the portion *s* not, however, being equal in weight to the portion of the pawl opposite the pivot. Upon a slow motion of the box with the roller the lugged extremity of the pawl moves forward toward the passage *l*; but before it reaches the mouth of the opening the weighted end of the pawl overbalances the lugged extremity, which latter is then about over the pivot, and draws the lug beneath the ridge, allowing the revolution of the curtain-roller to be continued. Upon a faster upward movement of the curtain the lugged extremity is

held by centrifugal force, and, because of its greater weight, into engagement with the wall or rim of the box, so that it is caused to enter the passage *l* and to enter into engagement with the stop *m*, whereby further movement of the curtain is prevented. The shoulder *o* of the spindle holds the plate *i* at a proper position in the box to allow a free movement of the pawls. By this construction the curtain is not loosened by a rebound of the pawl, as is often the case where said pawl, by the force of the spring alone, is held into engagement with a detent.

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

1. In combination, in a curtain-roll, a box having a pawl pivoted therein, and a spindle having the plate *i*, with a ridge formed upon the inner face thereof, forming a passage to receive the said pawl.

2. In combination, in a curtain-roll, a pawl pivoted upon a plate and having a laterally-projecting lug adapted to engage with a detent on a laterally-adjacent plate, *i*, substantially as herein shown and described.

3. In combination, the spindle having the plate *i* cast integral therewith, said plate having a detent thereon, and a plate adapted to revolve with the roller, and having a pawl pivoted thereto, and a rim made to receive the integral plate *i*, all said parts being arranged and operating substantially as set forth and shown.

4. In a curtain-roller, a pawl having the weighted portion *s* at one side of the pivotal center thereof, and a laterally-projecting lug adapted to engage with a laterally-adjacent plate, substantially as set forth and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of August, 1883.

SAMUEL ARMSTRONG.

Witnesses:
CHARLES H. PELL,
EDWARD G. KEMPF.