

(No Model.)

J. ALLEN.
SHADE ROLLER.

No. 308,124.

Patented Nov. 18, 1884.

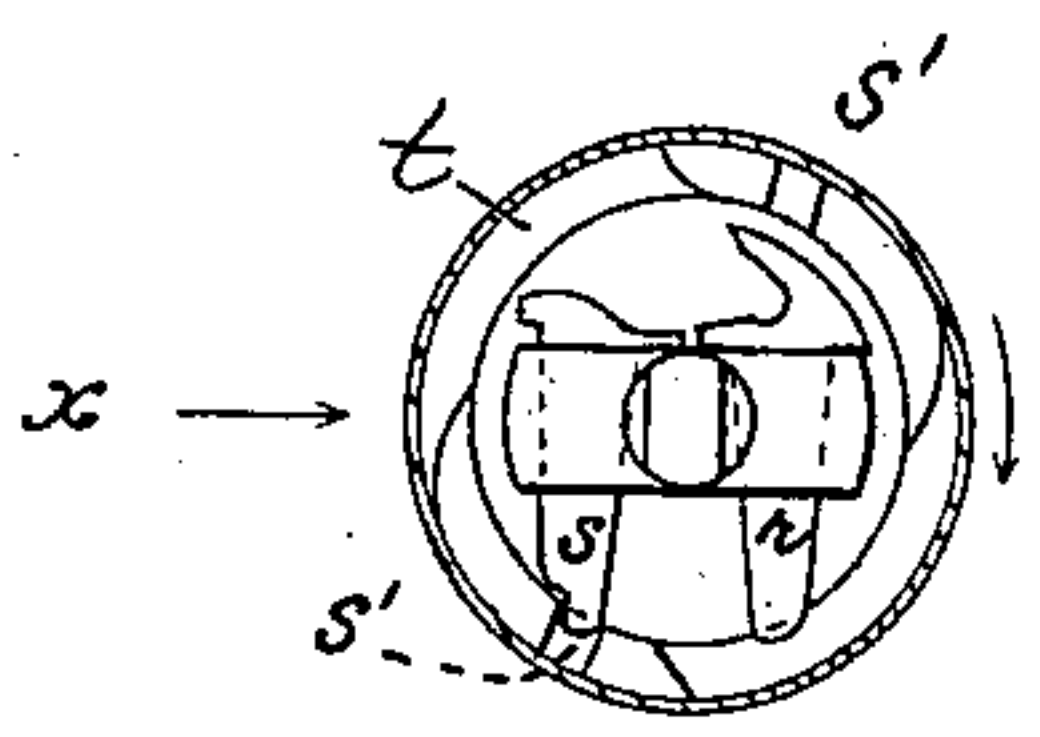


Fig. 2.

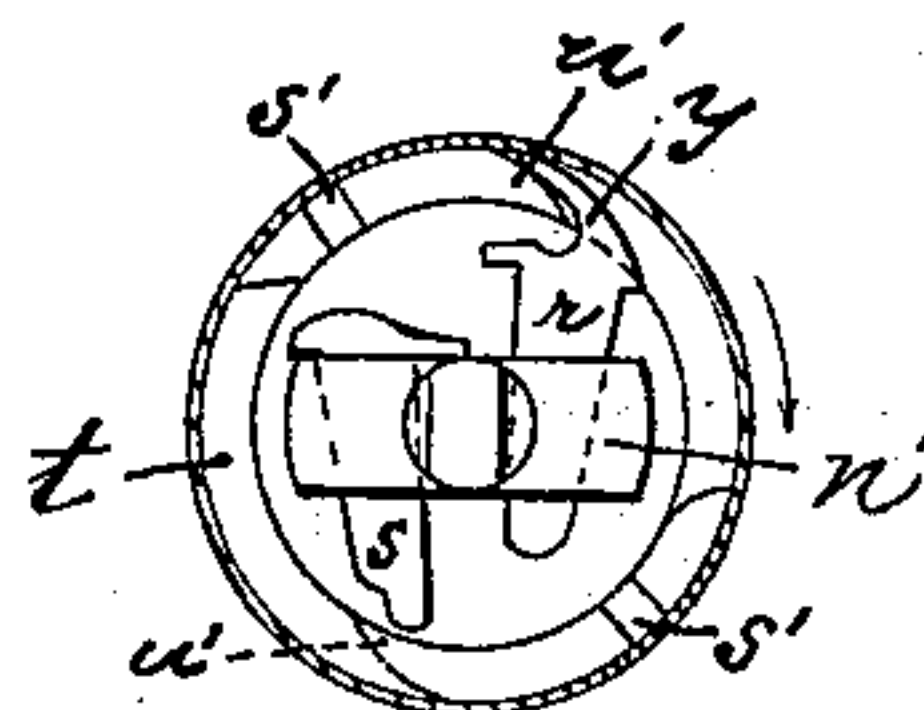


Fig. 3.

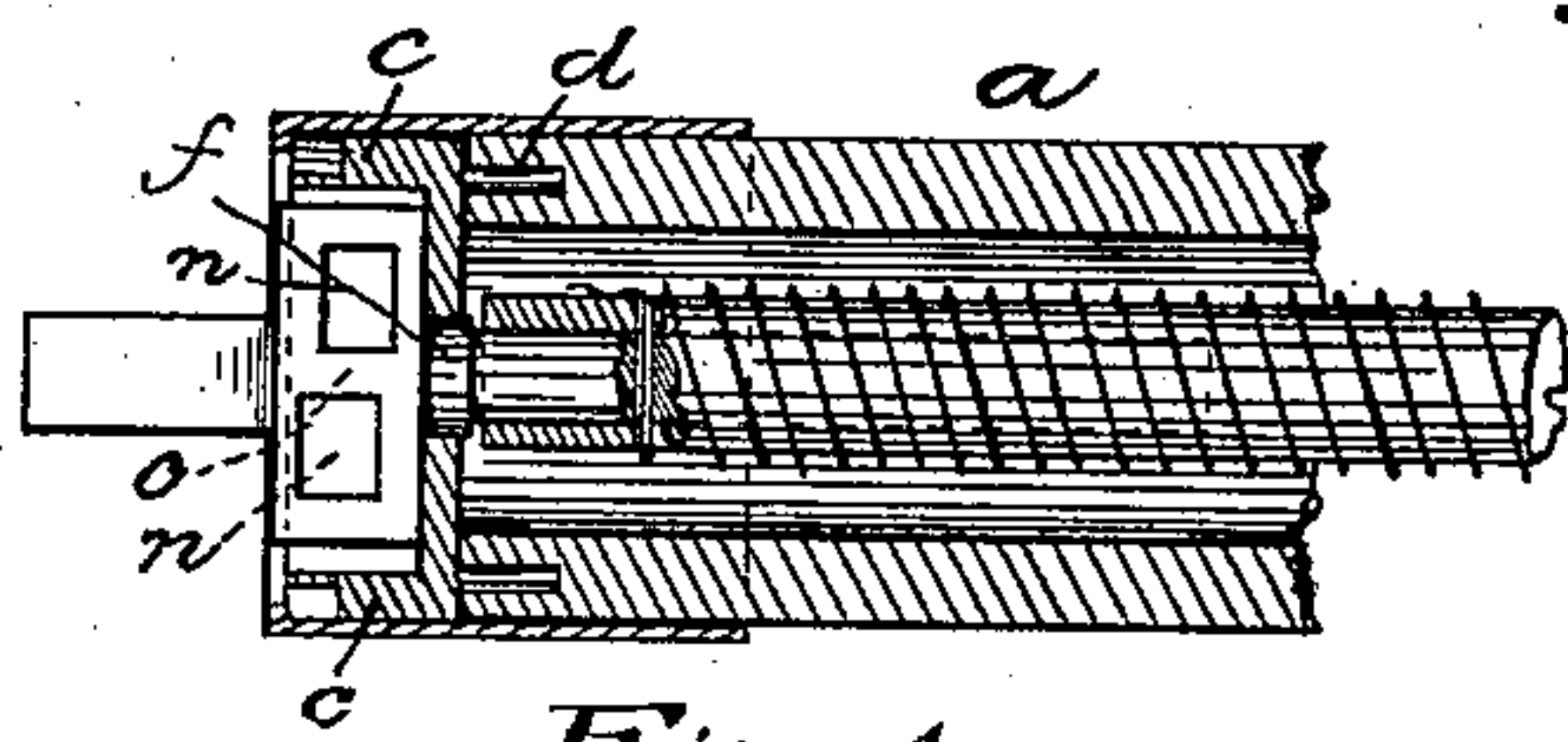


Fig. 4.

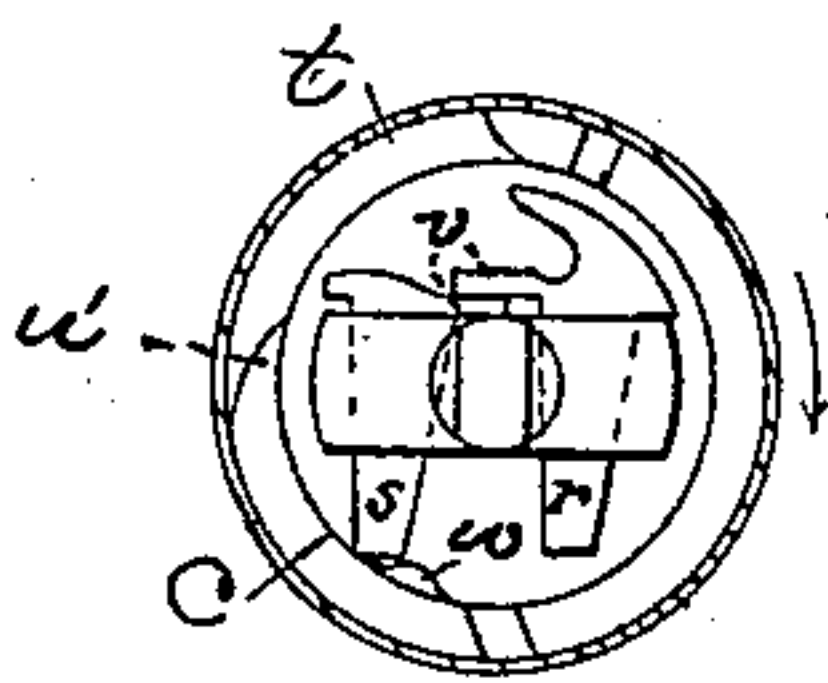


Fig. 5.

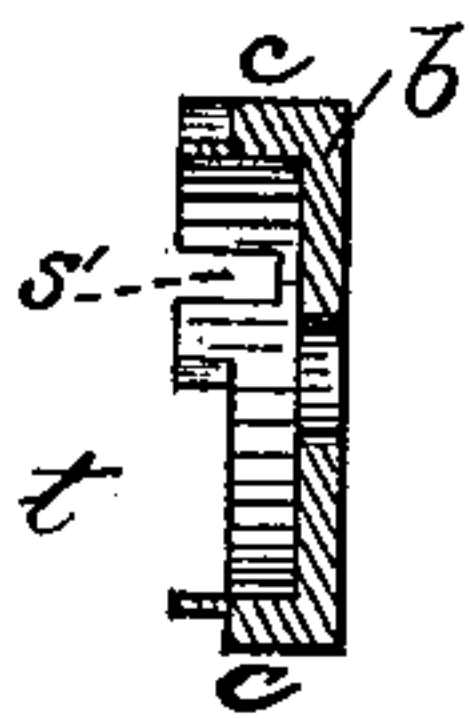


Fig. 6.

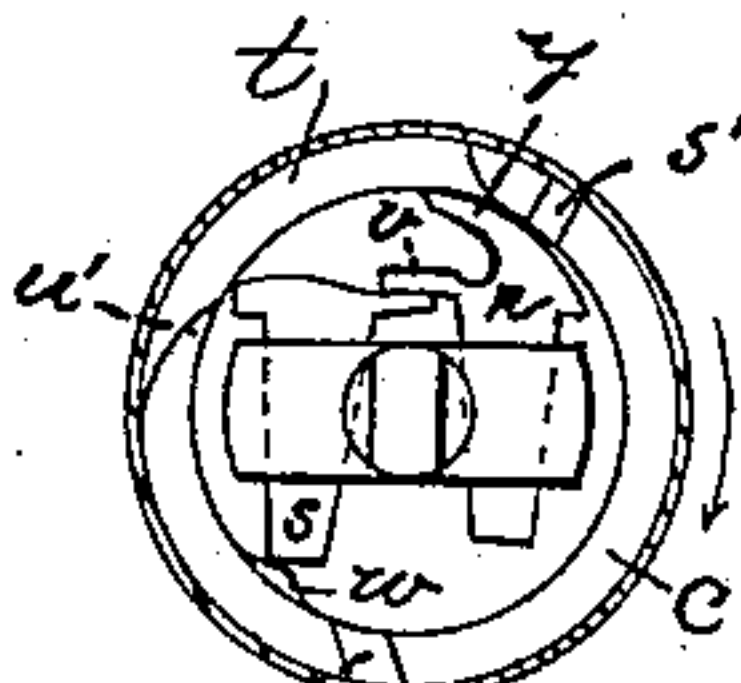


Fig. 7.

Attest:

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UNITED STATES PATENT OFFICE.

JOSIAH ALLEN, OF NEWARK, NEW JERSEY.

SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 308,124, dated November 13, 1884.

Application filed April 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH ALLEN, 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 Shade-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 curtain-rollers adapted to be stopped when raising the curtain or shade at both a fast and slow rate of speed, but adapted to allow the curtain to be raised at a moderate or intermediate rate without hinderance.

The object of the invention is to simplify the construction of the roller, to enable the parts to be easily cast or otherwise made, and to render the action of the roller more certain.

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

Referring to the accompanying drawings, in which similar letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a central longitudinal sectional view of a portion of the roller, the pawls being removed from their seats or openings to show more clearly the construction of the hub. Figs. 2 and 3 are end views of the device, showing the pawls in different positions of engagement. Figs. 4 and 5 are end views illustrating certain modifications of construction; and Fig. 6 is a detail section of an end piece of the roller, the section-line being taken through line *x*, Fig. 2.

In carrying out the invention I provide a roller, *a*, with a metallic end piece, *b*, having overhanging or outwardly-projecting peripheral portions *c*, which form a chamber or receptacle for the pawls and furnish detents to engage with the same. Said end piece is prevented from slipping in its relation to the body of the roller by suitable lugs or pintles, *d*, which project therefrom into the said body,

substantially as shown in Fig. 1. Said end piece is held upon the roller in any suitable manner; but I prefer a ferrule or band, *e*, with an inwardly-projecting rim turned over the end piece, as shown. Through the end piece passes a spindle, *f*, which is enlarged or flattened where it passes through the chamber in the end piece. Said flattened or enlarged portion is provided with openings *n n*, separated by a center-bar, *o*. Said openings receive the pawls, the hub or spindle holding the latter in position, so that as the end piece revolves certain parts of the peripheral portions *c* will engage with said pawls to stop the revolution of the roller. The pawls enter into holding relation to the end piece upon a slow revolution of the roller, the peripheral portion of said end piece being notched or recessed, as at *s'*, to receive said pawl when the end piece is revolving slowly. A fast movement of the end piece causes the pawl to clear the opening without engagement.

To stop the roller when the same is at a fast rate of speed, I provide what I term a "safety-catch," *r*, which prevents the curtain from flying upward should it slip from the hand. Said safety-catch is suspended in the remaining opening in the hub, so that when the roller revolves at a fast or quick rate of speed the lower end thereof engages with a projection on the peripheral portion, and the pawl is thrown upward into holding engagement with a detent on the opposite side of said peripheral portion. This may be accomplished in two or more ways; but the one I prefer is illustrated in Figs. 2 and 3.

At a quick movement of the roller in raising the curtain the lower end of the safety pawl or catch drops into the long recess *t*. There it is struck by the projection of the periphery, which throws the safety-catch upward into engagement with the detent *u'*. The portion *u'*, it will be observed, serves both as a detent to catch the pawl and as a projection to throw the same.

Should I so desire, I may cause the slow catch to throw the safety-catch by forming overlapping projections *v v*, Figs. 4 and 5, upon each of the pawls, the projection of the slow catch underlying that of the safety-catch.

I may also form a lug, *w*, on the inner face of the peripheral portion *c*, to engage with the said slow catch when the roller is at a fast rate of speed to throw the latter upward, this motion being transmitted to the safety-catch, throwing the latter upward, so that the hooked end *y* of said safety-catch enters the long recess *t*, and subsequently passes into holding contact with the detent *u'*, as will be understood. The upper extremities of the pawl, even when they do not overlap, are provided with lateral projections or heads of larger size than the openings in the spindle or hub. By said heads the pawls are suspended from said hub and prevented from falling so far into the recesses as that they would be liable to be held into improper engagement.

It will be observed upon reference to Fig. 6 that the opening or recess *s'* for the slow catch extends farther inward than the longer recess *t* for the safety-catch, and also upon reference to Fig. 1 that the opening in the spindle for the said slow catch is farther back or nearer to the roller-body than the one for the safety-catch. By this construction, when the pawls are in proper position, the slow catch is prevented from entering the recess for the safety-catch, as will be evident. Thus constructed, the roller is stopped at both a fast and a slow rate of speed, while at an intermediary rate the movement of the roller is untrammelled in its revolution.

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

35 1. A curtain-roller having a hub or spindle with separated openings *n n*, adapted to receive sliding pawls, substantially as and for the purposes herein set forth and shown.

40 2. A curtain-roller having a slow catch and an independent safety-catch, both sliding vertically in the spindle, substantially as herein set forth and shown.

45 3. In a roller, the combination of a perforated or open hub and a pawl having lateral projections or a head adapted to prevent the

pawl from sliding or falling through the said hub, substantially as set forth.

4. In combination, in a roller, the hub having separated openings, and independent pawls *r s*, arranged in said openings and adapted to engage with detents on the end piece, substantially as set forth and shown. 50

5. The combination of the roller *a*, the end piece having overhanging or outwardly-projecting peripheral portions provided with detents for the pawls, a hub having openings formed therein, and independent pawls, one operating to enter into holding engagement with the peripheral detent at a slow rate of speed, and the other adapted to enter into holding engagement at a fast rate of speed, all said parts being arranged and operating substantially as and for the purposes set forth and shown. 55 60

6. In a roller, a pawl, *r*, suspended from a hub or spindle, having lateral projections adapted to prevent the same from falling or dropping through said hub, and having a hook, *y*, adapted to enter into holding engagement with the peripheral detent *u'* when said pawl is thrown upward, substantially as herein set forth. 65 70

7. In a roller, a hub or spindle having separated openings therein, one of which is arranged back of the other, substantially as herein set forth, for the purposes specified. 75

8. In a curtain-roller, the combination of the hub and end piece and a fast catch suspended from the said hub, and having an elongated end extending into the recess *t* in the peripheral portion of said end piece to engage the extremity *u'*, substantially as and for the purposes set forth and shown. 80

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of April, 1884.

JOSIAH ALLEN.

Witnesses:

CHARLES H. PELL,
F. F. CAMPBELL.