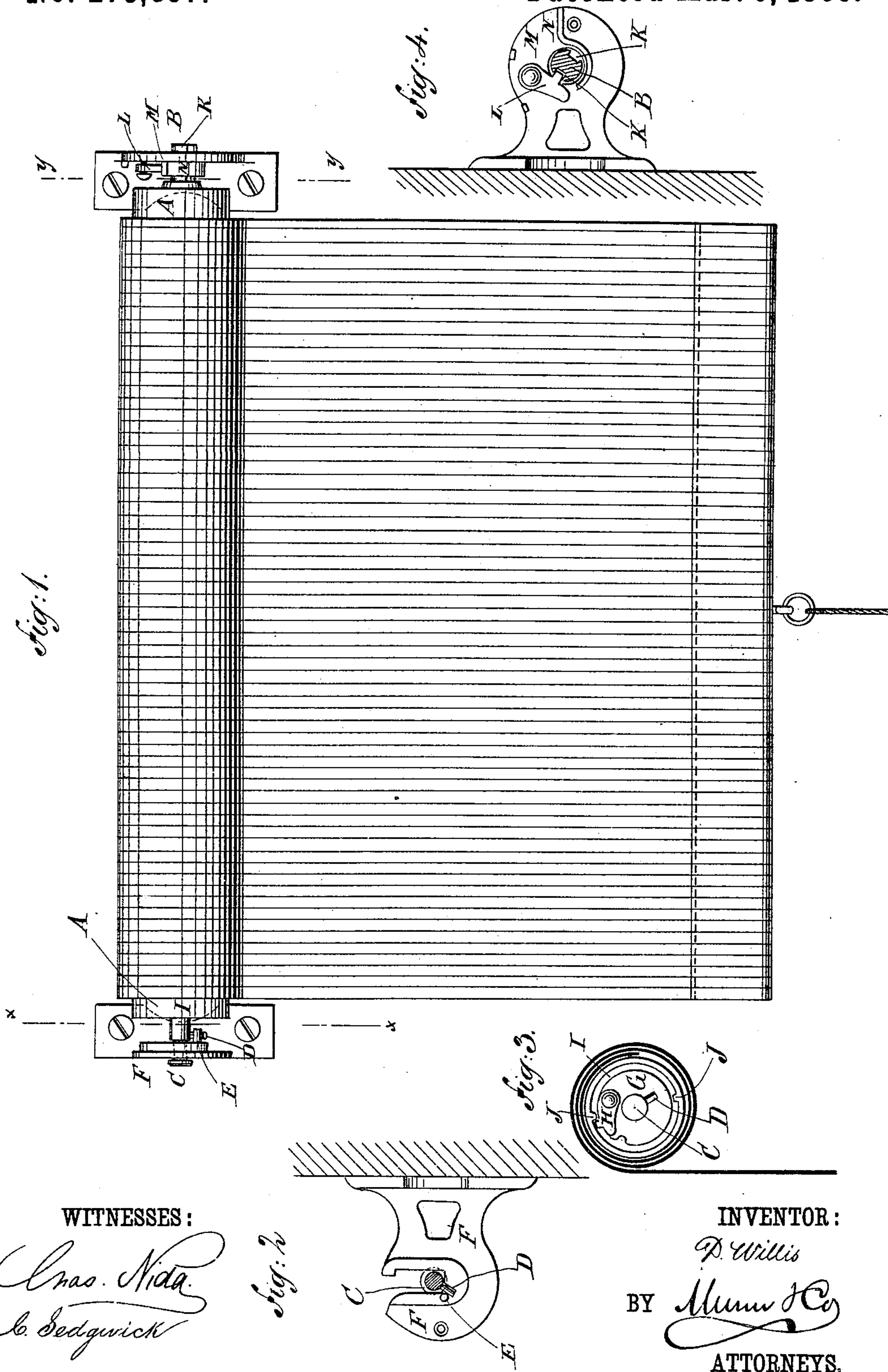


(No Model.)

D. WILLIS.
SPRING SHADE ROLLER.

No. 273,657.

Patented Mar. 6, 1883.



WITNESSES:

Chas. Nida
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UNITED STATES PATENT OFFICE.

DANIEL WILLIS, OF HARRISON, ASSIGNOR OF ONE-HALF TO ELBRIDGE G. DUVALL, OF DAYTON, NEW JERSEY.

SPRING SHADE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 273,657, dated March 6, 1883.

Application filed October 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL WILLIS, of Harrison, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Spring Shade-Rollers, or which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement. Fig. 2 is a sectional elevation of the same, taken through the line *xx*, Fig. 1. Fig. 3 is an end elevation of the roller detached from its bracket. Fig. 4 is a sectional elevation taken through the line *yy*, Fig. 1.

The object of this invention is to facilitate the insertion of spring shade-rollers in their brackets and their removal therefrom.

A represents a roller, with one end of which is rigidly connected a spindle, B. With the other end of the roller A is connected by a spring, in the ordinary manner, a loose spindle, C, so that when the said spindle is held stationary and the roller is revolved by drawing down or unrolling the shade the said connecting-spring will be put under tension, so as to roll up the shade when the said shade is released. The connecting-spring is not shown in the drawings, as there is nothing new in its construction or use.

To one side of the spindle C, at the inner end of its journal, is attached a pin, D, or upon it is formed a lug to engage with a pin, E, attached to the bracket F, or a lug formed upon the said bracket at the side of the lower part of its slot-bearing, so that the spindle C will be held from turning when the roller A is turned in drawing down the shade.

To the spindle C, at the end of the roller A, is attached a disk, G, to which is pivoted a pawl, H.

To the end of the roller A is attached a band, I, which projects over the disk G and pawl H, and has ribs J formed upon its inner surface for the pawl H to engage with to hold the spindle C, when released from the bracket F, from turning, and thus allowing the spring to uncoil. With this construction, when the spindle C is placed in the slot-bearing of the bracket F and the shade is drawn down the

pin D of the spindle C will strike against the pin E of the bracket F and hold the spindle C from turning, so that the spring will be coiled by drawing down the shade. When spindle C is raised from the slot-bearing of the bracket F the spindle C will be turned by the uncoiling of the spring, and the pawl H will be thrown outward by centrifugal force to engage with the ribs J of the band I and hold the spindle C from being turned, and the further uncoiling of the spring will be prevented, so that the spindle C can be readily raised from and inserted in the slot-bearing of the bracket F without any danger of wholly uncoiling the spring. The pawl H is so arranged, in connection with the pins D E, as to be directly above the spindle C when the said pins D E are engaged, so that the said pawl will drop out of gear with the ribs J and rest upon the upper side of the said spindle.

In the spindle B are formed one or more longitudinal grooves, K, to receive the pawl L, pivoted to the bracket M, and hold the roller A from being turned by its spring when the shade has been adjusted in the desired position. When the roller A is turned quickly by drawing down the shade or by allowing the shade to be rolled up by the action of the spring the pawl L will pass over the grooves K without engaging with them. When the roller A is turned slowly in either direction the pawl L will have time to drop into the groove K and lock the said roller.

To the inner side of the bracket M is attached, or upon it is formed, a flange, N, the outer end of which is extended to the outer edge of the said bracket, and which serves as a guide in inserting the spindle B in its bearing in the said bracket M, so that the said spindle can be conveniently inserted in its bracket. The flange N also serves as a stop to prevent roller A from moving longitudinally in one direction, while the pin D serves as a stop to prevent the said roller from moving longitudinally in the other direction.

I am aware that a sliding clutch has been employed to lock the roller and shaft together when out of the bracket; also that a pawl on a shaft-collar working in a recess of a band on the end of roller has been employed to lock the roller and shaft when the spindle is out of bracket; but

What I claim as new and of my invention is—

1. In a curtain-fixture, the pawl H on the spindle-collar G, and the spindle-lug D, arranged on opposite sides of the spindle C, to bring the said pawl above the spindle when the pins D E are engaged, and thus allow it to drop by its own gravity out of gear with the ribs J, as described.

2. The combination, with a shade-roller and loose spring-held spindle C, of the lug or pin

D, arranged at the inner end of the journal of said spindle, and the bracket F, carrying the lug or pin E at the side of its slot, whereby the spindle will be prevented from turning when the shade is being drawn down, as described.

DANIEL WILLIS.

Witnesses:

JAMES T. GRAHAM,
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