

(No Model.)

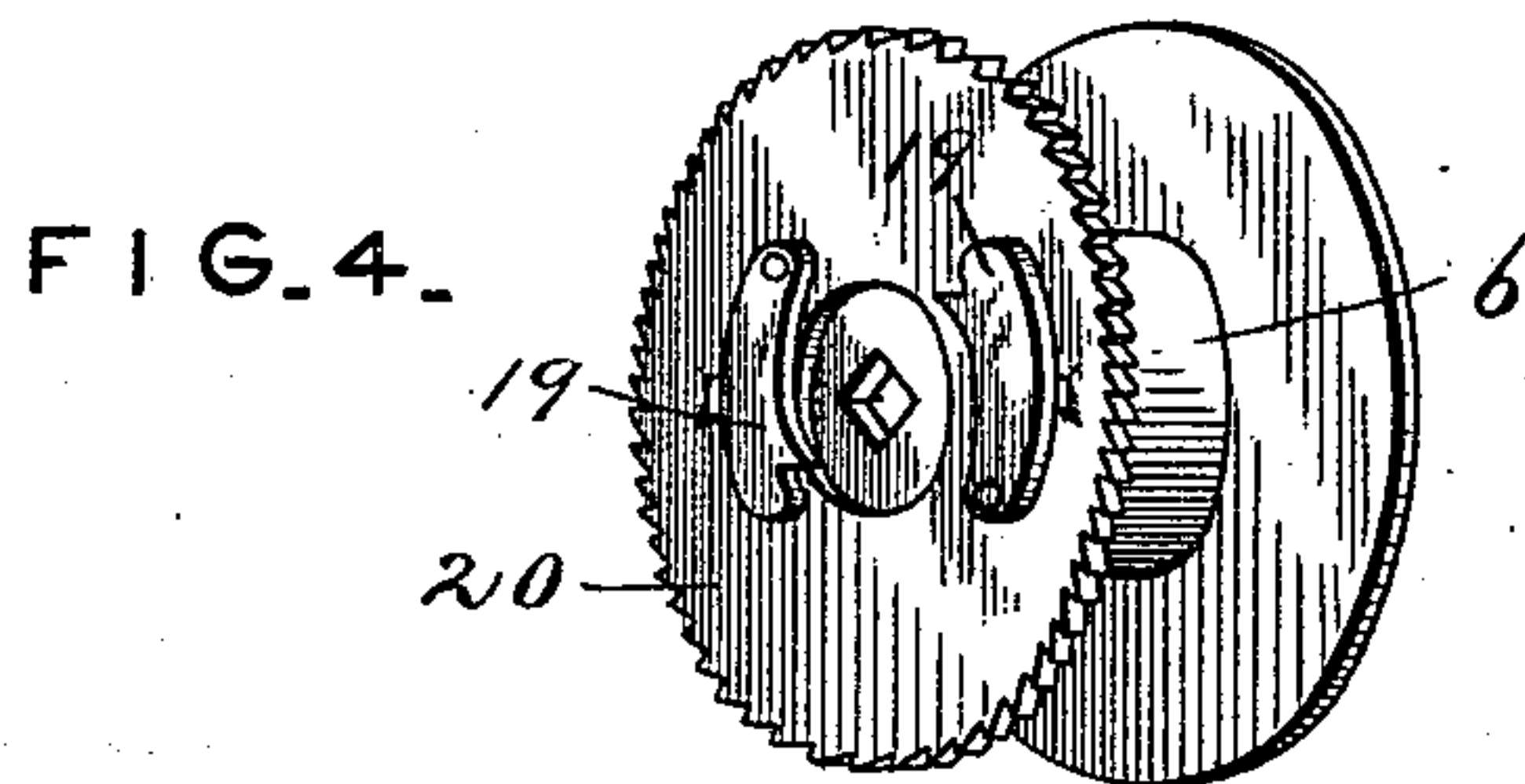
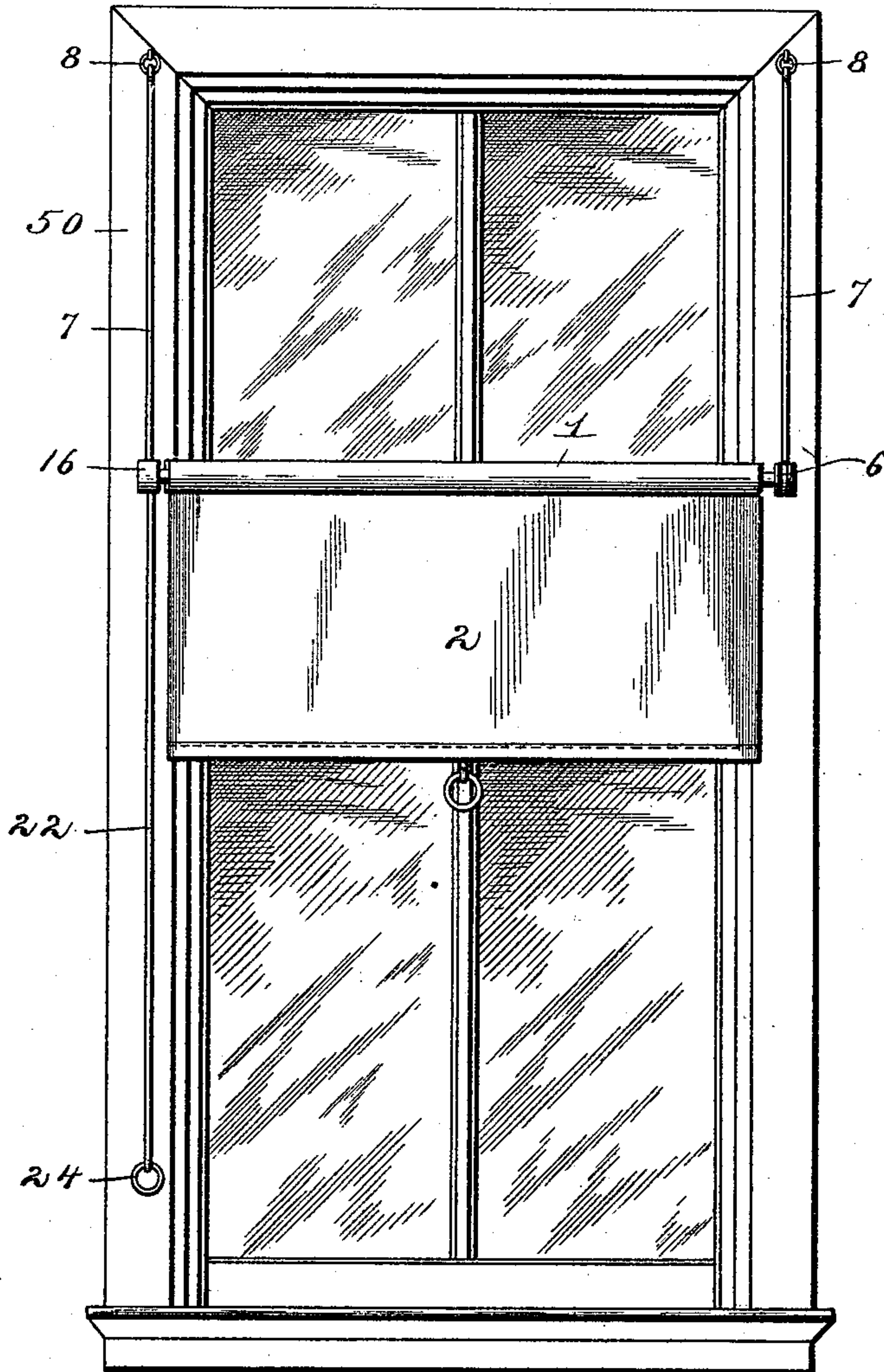
2 Sheets—Sheet 1.

I. WILLIAMS.
CURTAIN FIXTURE.

No. 539,108.

Patented May 14, 1895.

FIG. 1.



Inventor

Irvin Williams.

Witnesses

Harry L. Amer.
S. P. Holmquist

By *his* Attorneys.

C. A. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

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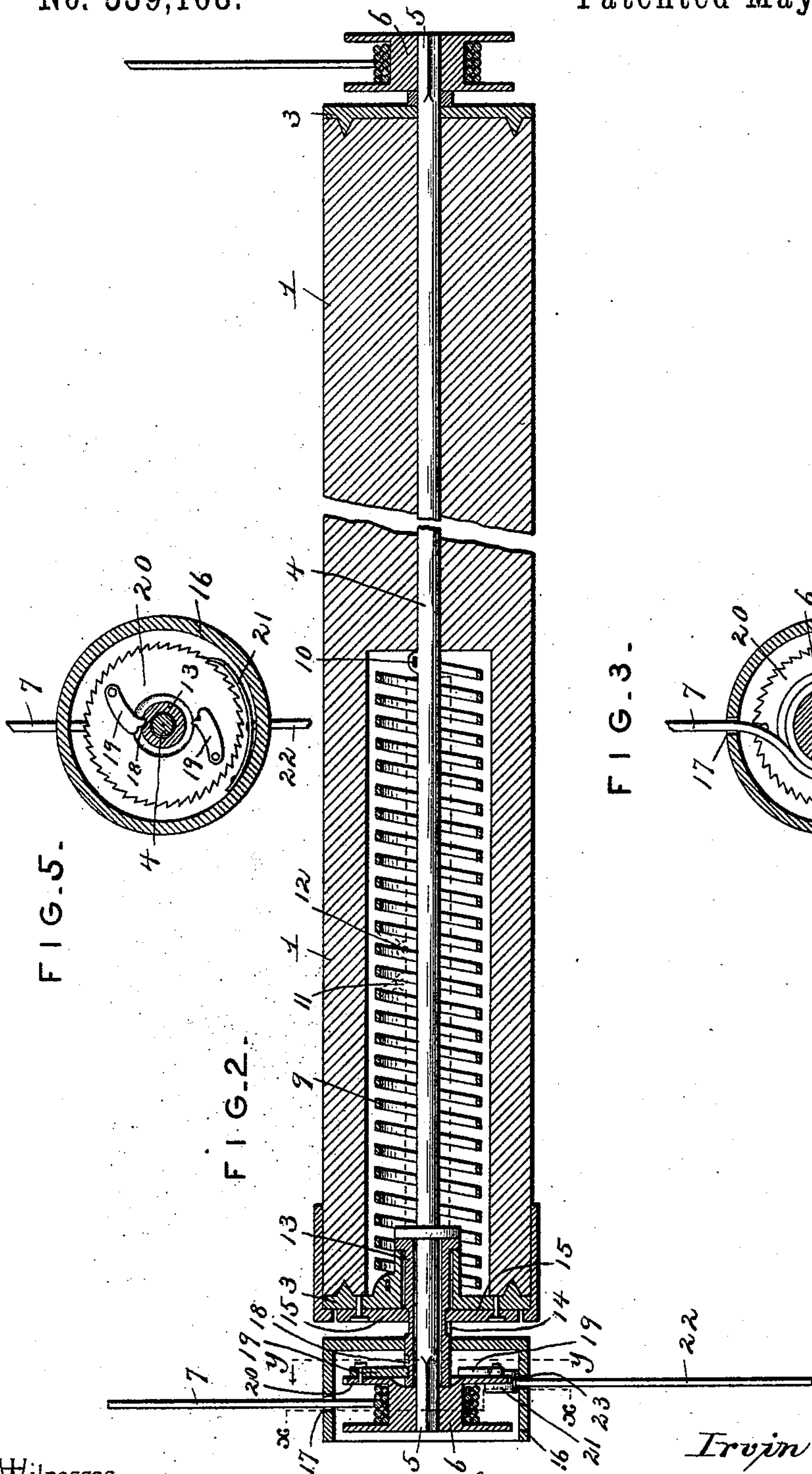


FIG. 5.

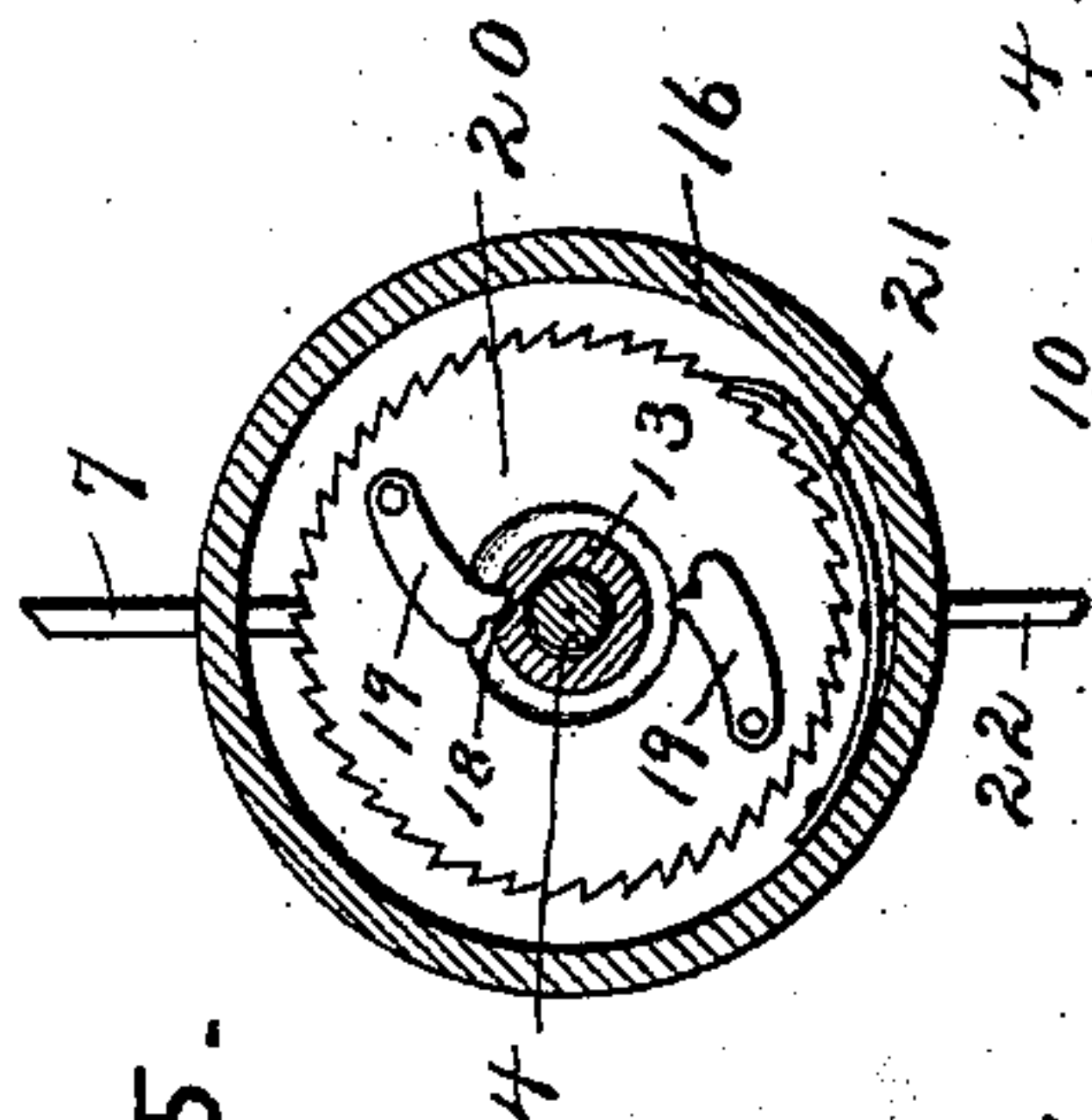
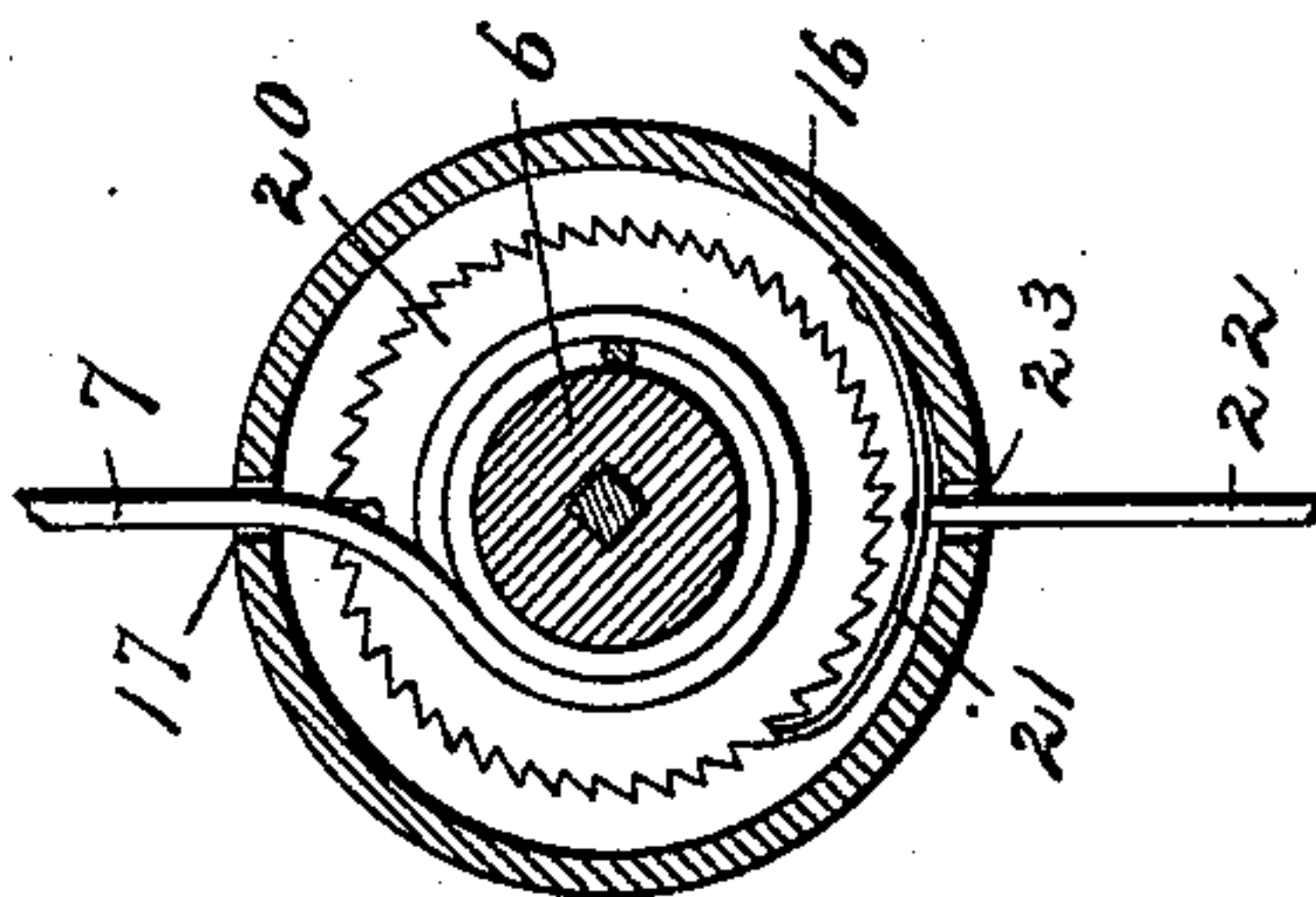


FIG. 3.



Witnesses

Harry L. Amer.

[Signature]

By *[Signature]* His Attorneys.

Inventor

Irvin Williams.

[Signature]

UNITED STATES PATENT OFFICE.

IRVIN WILLIAMS, OF NELSON, MISSOURI.

CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 539,108, dated May 14, 1895.

Application filed June 14, 1894. Serial No. 514,579. (No model.)

To all whom it may concern:

Be it known that I, IRVIN WILLIAMS, a citizen of the United States, residing at Nelson, in the county of Saline and State of Missouri, have invented a new and useful Curtain-Fixture, of which the following is a specification.

The invention relates to curtain fixtures.

The object of the present invention is to provide certain improvements in curtain fixtures of that class wherein the curtain and the curtain roller can be raised and lowered separately, or together at the same time, to provide for covering and uncovering the top and bottom portions of a window for regulating the light and ventilation.

To this end the main and primary object of the present invention contemplates certain improvements upon Patent No. 518,977, granted to me May 1, 1894, whereby the curtain fixture described and claimed in such patent shall be rendered more positive and perfect in operation.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangements of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a front elevation of a curtain-fixture constructed in accordance with this invention shown as applied to a window-frame. Fig. 2 is an enlarged central longitudinal sectional view of the adjustable curtain-roller and the appurtenances thereof. Fig. 3 is a detail sectional view on the line *xx* of Fig. 2. Fig. 4 is an enlarged detail in perspective of the winding wheel or pulley having the ratchet disk or flange. Fig. 5 is a detail sectional view on the line *yy* of Fig. 2.

Referring to the accompanying drawings, 1 designates an ordinary curtain roller formed of either wood or metal and partially or entirely hollow throughout the length thereof to accommodate the shaft devices to be described, and said curtain roller accommodates thereon the ordinary curtain shade 2, that is raised and lowered by winding and unwinding on the roller in the ordinary manner. The said curtain roller 1, has fitted on the opposite ends thereof the end bearing plates or

disks 3, that are centrally perforated to receive the opposite ends of the longitudinal roller shaft 4, which extends beyond both ends of the roller and is provided with squared extremities 5, to receive thereon the winding wheels or pulleys 6, on which wind and unwind the lower ends of the supporting tapes or cords 7, the upper ends of which are suitably secured as at 8, to the top and one side of the window frame 50, said tapes or cords providing a support for the entire curtain fixture and at the same time providing means, by winding and unwinding on the wheels 6, for raising and lowering the roller to cover and uncover the top portion of the window.

The curtain roller 1, accommodates within one end thereof the roller spring 9, attached at one end to one of the end bearing plates or disks 3, and at its other end to the shaft 4, at an intermediate point thereof as at 10, and this single spring 9, may be replaced by separate springs 11 and 12, of different tensions, which springs are shown in Fig. 2, in dotted lines and correspond to the two springs shown and described in my former patent hereinbefore referred to. The roller shaft 4, which has one end of the roller spring connected thereto in the manner described, accommodates thereon at one end the non-rotative shaft sleeve 13, that is arranged to extend beyond the inner and outer sides of one of the end bearing plates or disks 3, and just outside of such bearing plate or disk the said shaft sleeve is provided with the pawl notches 14, that are adapted to be engaged by the ordinary arresting pawls 15, pivoted to one end of the roller and providing means for arresting the motion thereof to check the shade 2, at any height, whereby the said shade may be operated in the ordinary manner by grasping the same with the hand to allow it to quickly wind on the roller under the tension of the spring, or to unwind from the roller by pulling down on the shade against the tension of the spring.

The non-rotative shaft sleeve 13, carries thereon outside of one end of the roller and at one side of the pawl notches 14, a cylindrical wheel cap 16, that loosely incloses therein the winding wheel or pulley at one end of the roller and is provided in the top thereof with

an opening or perforation 17, through which passes one of the supporting tapes or cords. The shaft sleeve projects slightly inside of the cap 16, mounted thereon and is provided in such extremity with the pawl notch 18, adapted to be engaged in one direction by the check pawls 19, pivoted to the inner side of the winding wheel or pulley arranged within the wheel cap, and providing means for locking or checking the curtain roller in one direction to prevent the same from ascending under the lifting tendency of the roller spring, such roller spring of course being maintained at a sufficient tension to raise the roller when released from its check devices. It will therefore be observed that the pawl notch 18, is shouldered only at one side in order that the pawls will engage therewith only in one direction, that is when the winding wheels or pulleys are induced to turn in a direction to wind up the tapes or cords thereon to elevate the roller.

The construction just described is similar to that set forth and claimed in my former patent with the exception of the pawl notch 18, and the engagement of the pawls 19, with such notch in one direction to check the ascent of the roller, and in the present invention the winding wheel or pulley carrying the pawls 19, is provided on its inner side with the ratchet disk or flange 20, the shoulders of the teeth of which are disposed reversely to the shoulder of the notch 18, and are adapted to be engaged by the free end of the curved spring pawl 21. The curved spring pawl 21, is secured fast at one end within the cylindrical wheel cap 16, and has attached thereto the upper end of the releasing cord 22, that passes through a bottom opening or perforation 23 in the cap 16 and has a finger ring or knob 24, connected to its lower end whereby the cord can be easily grasped for releasing the curved pawl from engagement with the ratchet disk or flange. The engagement of the pawl with the ratchet disk or flange of one of the winding wheels or pulleys positively locks the shaft 4, against rotation in a direction that would allow the curtain roller to lower, and the pawls 19, prevent a rotation of the shaft in an opposite direction, and this arrangement prevents the curtain roller or entire fixture from being raised or lowered except by use of

the cord 22, no matter how hard or suddenly the curtain shade 2, may be grasped or jerked.

Whenever it is desired to raise or lower the entire fixture, the curved spring pawl 21, is drawn down against the side of the wheel cap out of engagement with the ratchet disk or flange and allows the shaft 4, to revolve so that the roller can be either lowered against the tension of the spring 9, or allowed to quickly ascend under the lifting tension of the spring in a manner easily understood. With the spring pawl engaged with the ratchet disk or flange and one of the pawls 19 engaged with the notch 18, the curtain shade may be independently raised and lowered as usual.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

In a curtain fixture, the combination of an ordinary spring actuated shade roller, a shaft extending longitudinally through the roller, winding wheels attached to the outer extremities of said shaft, and one of which wheels is provided with a peripherally toothed ratchet disk or flange, a non-rotative sleeve arranged on the shaft at one end of the roller and having a cylindrical wheel cap inclosing the wheel with the ratchet disk or flange, a pair of pawl notches at one side of the wheel cap, and a single pawl notch inside of the wheel cap, said single pawl notch having its shoulder disposed reversely to the shoulders of the teeth of said ratchet disk or flange, the arresting pawls pivoted at one end of the roller, the check pawls mounted on the cap inclosed wheel, a curved spring pawl mounted within the wheel cap and adapted to engage the teeth of the ratchet disk or flange, a pull cord attached to said spring pawl, and the supporting tapes or cords, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

IRVIN WILLIAMS.

Witnesses:

LEE I. SHUCK,
L. M. HAYNIE.