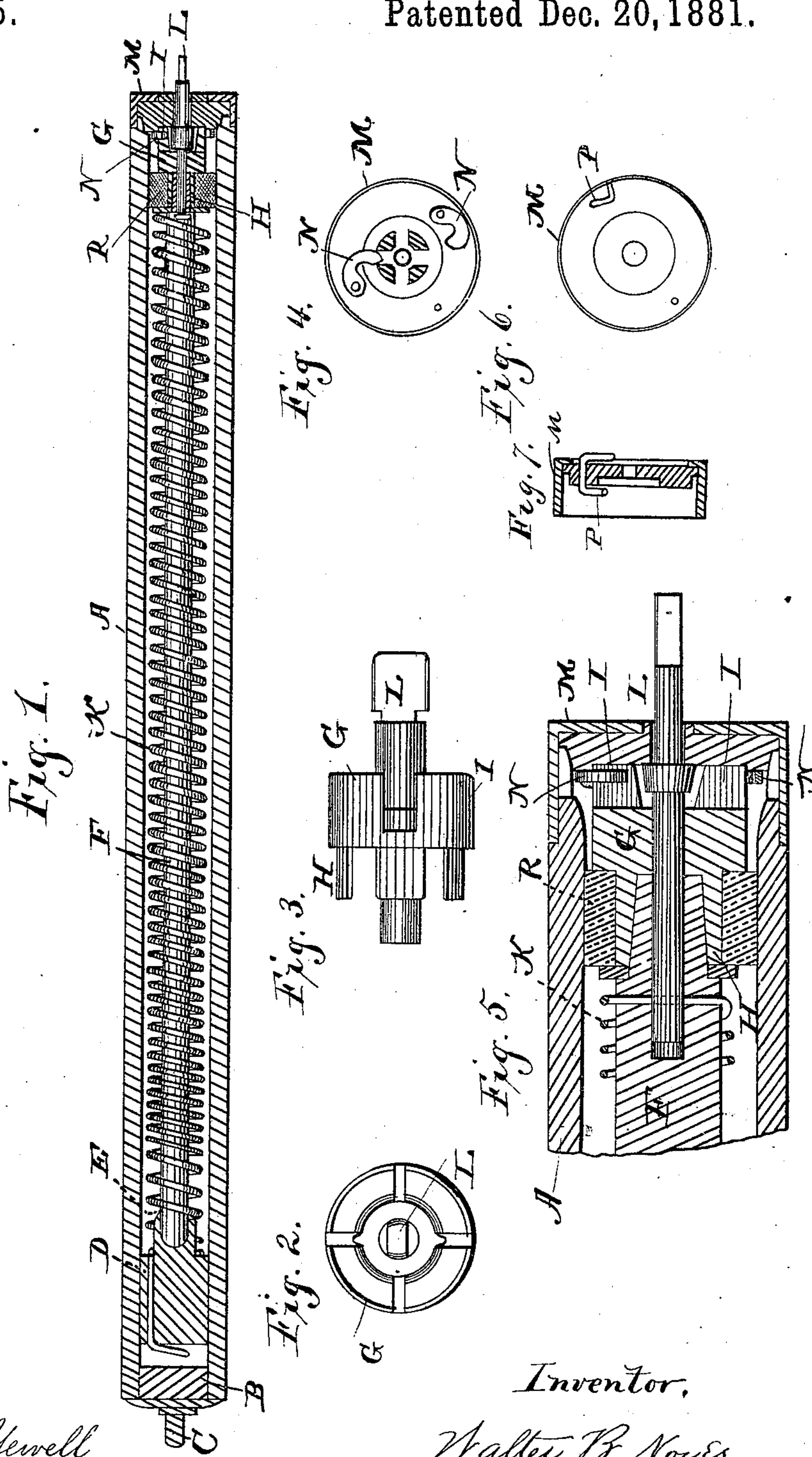


(No Model.)

W. B. NOYES.
SPRING CURTAIN ROLLER.

No. 251,275.

Patented Dec. 20, 1881.



Witnesses,
Edwin L. Jewell
H. Aubrey Toutmin

Inventor,
Walter B. Noyes,
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UNITED STATES PATENT OFFICE.

WALTER B. NOYES, OF SAGINAW, MICHIGAN.

SPRING CURTAIN-ROLLER.

SPECIFICATION forming part of Letters Patent No. 251,275, dated December 20, 1881.

Application filed July 22, 1881. (No model.)

To all whom it may concern:

Be it known that I, WALTER B. NOYES, of Saginaw, in the county of Saginaw, and in the State of Michigan, have invented certain new and useful Improvements in Curtain-Rollers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in shade or curtain rollers; and it has for its objects to provide certain means whereby the wooden shaft of the roller may be prevented from splitting when the stationary head is driven thereon; to provide a stationary head which may be conveniently employed for different-sized shafts, and, further, to provide for holding the shaft against the recoil of the spring, when the roller is employed as a balanced roller, upon its removal from its seats, as more fully hereinafter specified. These objects I accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal sectional view of my improved roller; Fig. 2, an end elevation of the stationary head and the bolt by which the wooden shaft is held and prevented from turning. Fig. 3 represents a detached view of the stationary head and bolt; Fig. 4, a detached view of the cap which fits over one end of shell or casing of the roller, showing the pawls adapted to engage the slots in the stationary head; Fig. 5, a sectional view of the roller, stationary head, and bolt enlarged; and Figs. 6 and 7, views of a modification of the cap employed when the roller is employed as a balanced roller.

The letter A indicates a hollow tube or cylindrical shell, provided at one end with a plug, B, having a journal, C, which may be secured, or which has its bearings, in one of the brackets supporting the roller.

The letter D indicates a cylindrical block, secured in the same end of the hollow tube or cylindrical shell. This block is provided with a bearing, E, for the shaft F. The said shaft at its opposite end is provided with a stationary head, G. The said head is formed of cast metal, with flanges H I of different diameters, so that it may be applied to shafts of different

diameters, as may be desired. The flange embraces the end of the shaft in such manner as to bind it and prevent it from splitting when the bolt is driven into the end of the same, thus dispensing with a ferrule, which has been hitherto found necessary for the purpose.

The letter K indicates a spiral spring surrounding the fixed shaft. One end of said spring is secured to the plug or block D and the other to the fixed shaft, the end passing through the said shaft and the bolt inserted therein.

The letter L indicates the bolt, which is squared at the end, so as to be held against turning in the supporting-bracket. The said spiral spring surrounds the fixed shaft longitudinally, as shown in Figs. 1 and 5 of the drawings.

The letter M indicates a cap secured to the tube or shell of the roller at one end, which may be secured in any convenient manner. The said cap on the inside is provided with a disk, seated therein, having one or more pawls, N, which are adapted to engage the slots in the outer flange of the stationary head and be held thereby to secure the roller in any desired position.

In the modification shown in Figs. 6 and 7 of the drawings the letter P indicates a bent wire passing through the cap. This serves to hold the casing and shaft in their proper relative positions against the strain of the spring when the roller is removed from its seats, the wire being so turned when it is desired to secure the parts that its inner end will engage one of the slots on the stationary head. This latter construction is intended to be employed when the roller is employed as a balance-roller. In this case the pawls are dispensed with, and a felted or other similar friction annulus, R, is employed instead.

The operation of my invention is as follows: The roller is journaled at one end in a supporting-bracket, the bolt at the other end being rigidly secured in a corresponding bracket. The shade or curtain is secured to the hollow tube or shell. Upon drawing slowly upon the shade or curtain the tube or casing will be rotated, the pawls engaging the slots in the flange, so as to hold the tube or shell in any desired position. Upon releasing the shade suddenly the pawls will ride over or by the slots and

permit the spring to operate and turn the tube or shell so as to wind the curtain or shade upon the roller.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with the hollow tube or cylindrical shell having a journal at one end and a cylindrical block provided with a suitable bearing, the shaft provided with a fixed double-flanged slotted head, the spiral spring, and the cap carrying a disk seated therein, and provided with pawls adapted to engage the slots on the fixed head, substantially as and for the purposes specified.

2. In combination with the fixed shaft, the hollow tube or cylindrical shell, and the double-

flanged slotted head, one end thereof being adapted to be secured upon the end of the fixed shaft, and the other engaging with the stop-pawls, substantially as specified.

3. The combination of the hollow shell, the fixed shaft, the double flanged slotted head and bolt, and the cap and disk seated therein and having pawls, all arranged to operate substantially in the manner specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 20th day of June, 1881.

WALTER B. NOYES.

Witnesses:

N. S. WOOD,
E. M. JOSLIN.