

No. 842,936.

PATENTED FEB. 5, 1907.

C. B. CASE.
WINDOW SHADE ROLLER.
APPLICATION FILED MAY 23, 1906.

Fig. 1.

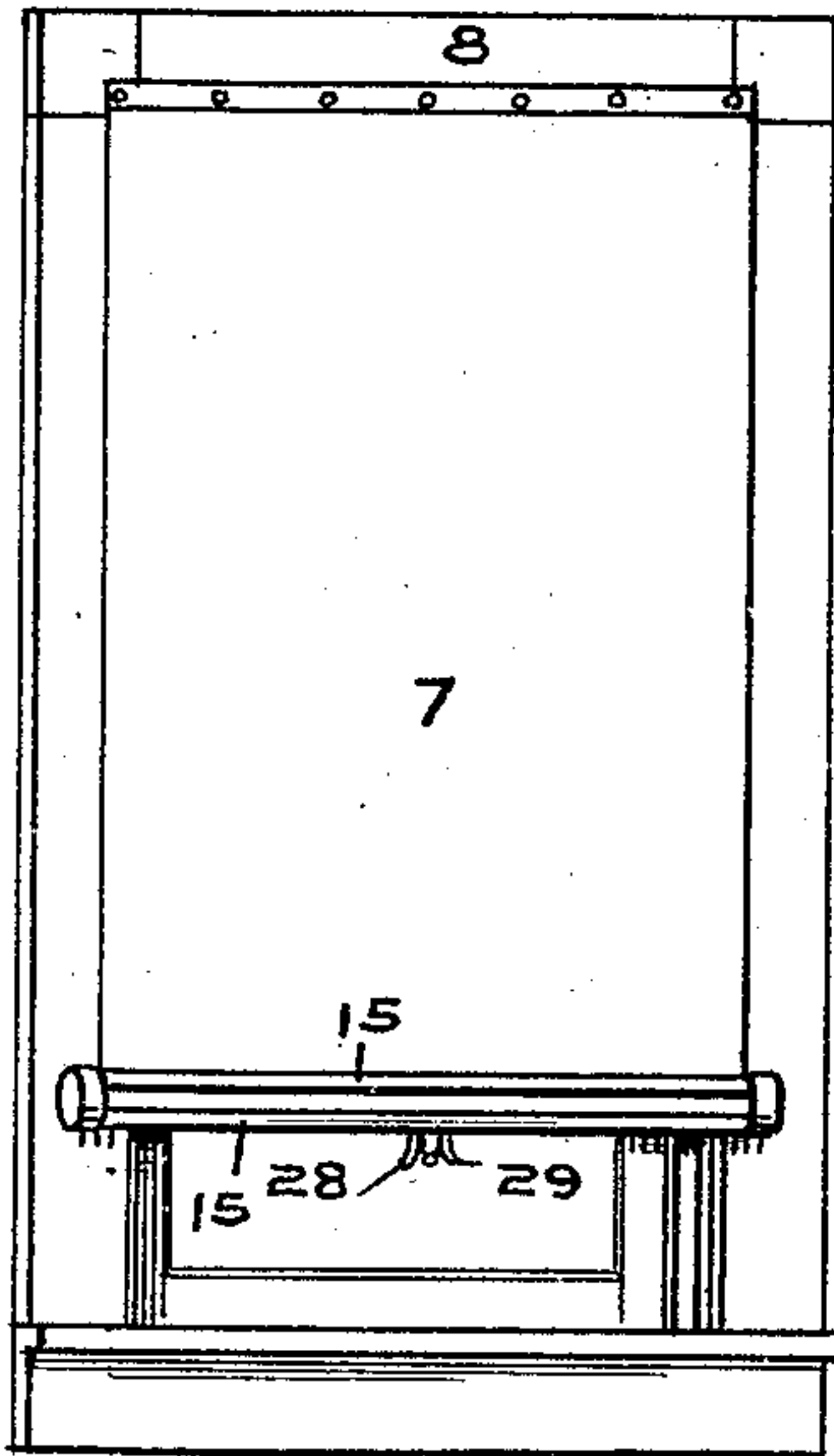


Fig. 2.

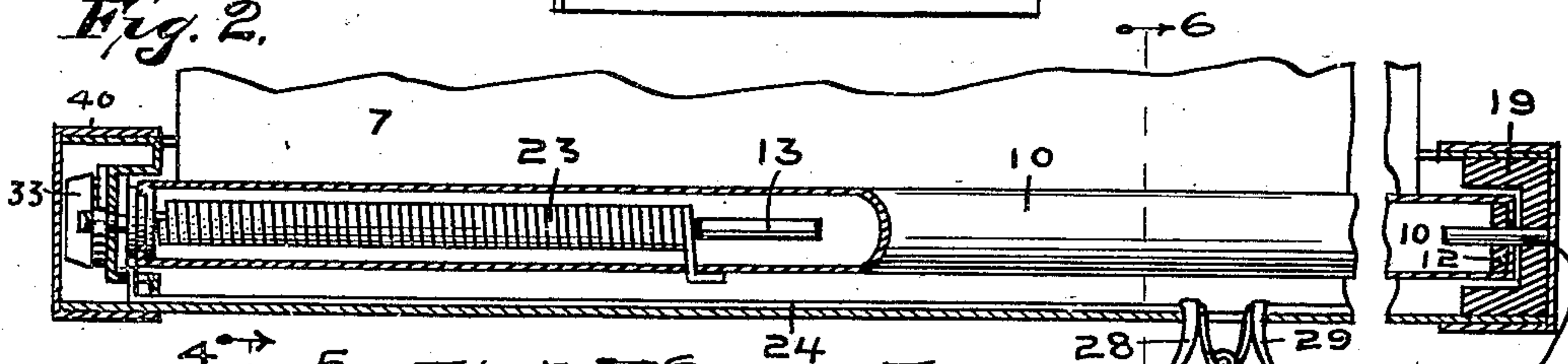


Fig. 3.

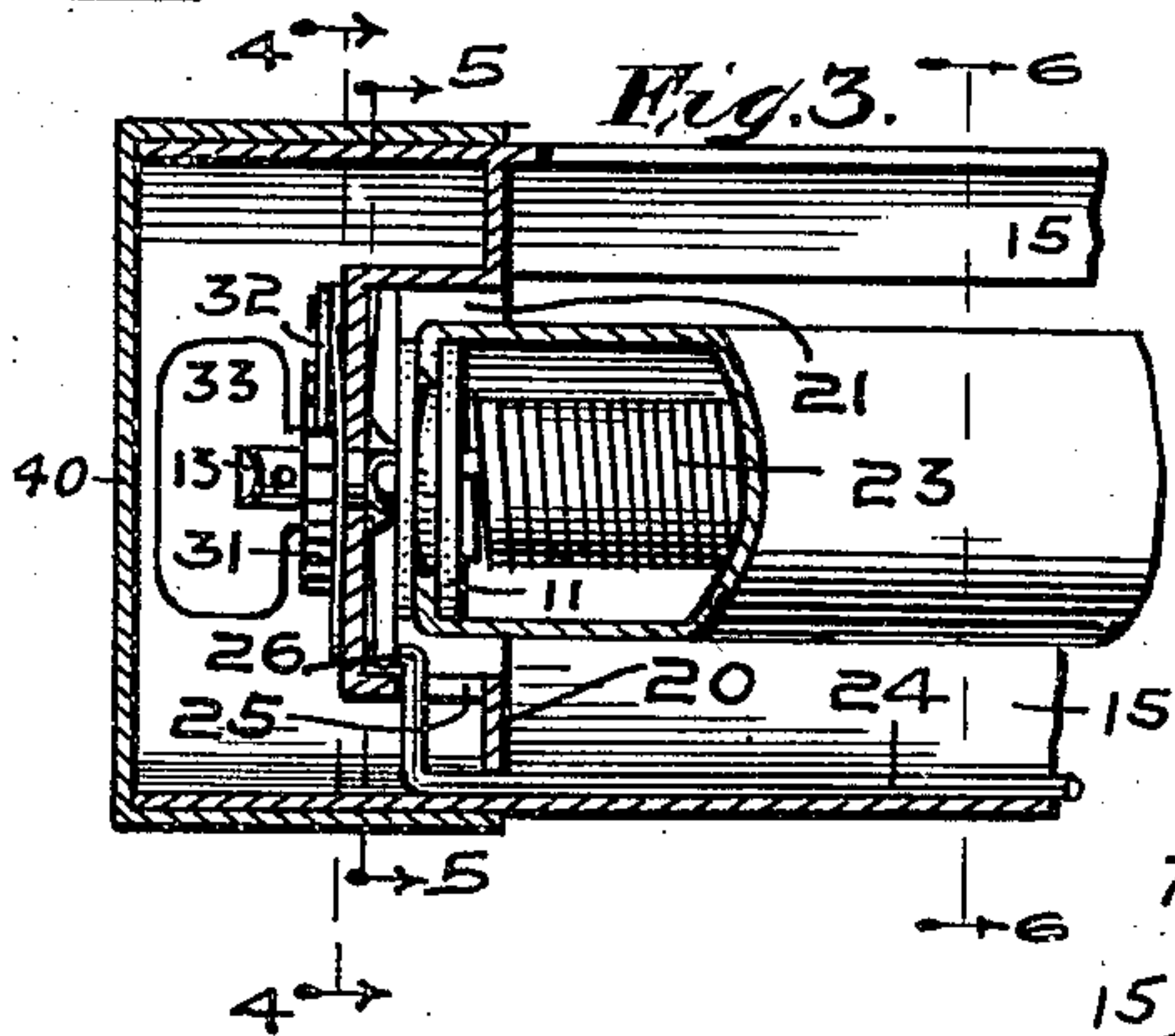


Fig. 4.

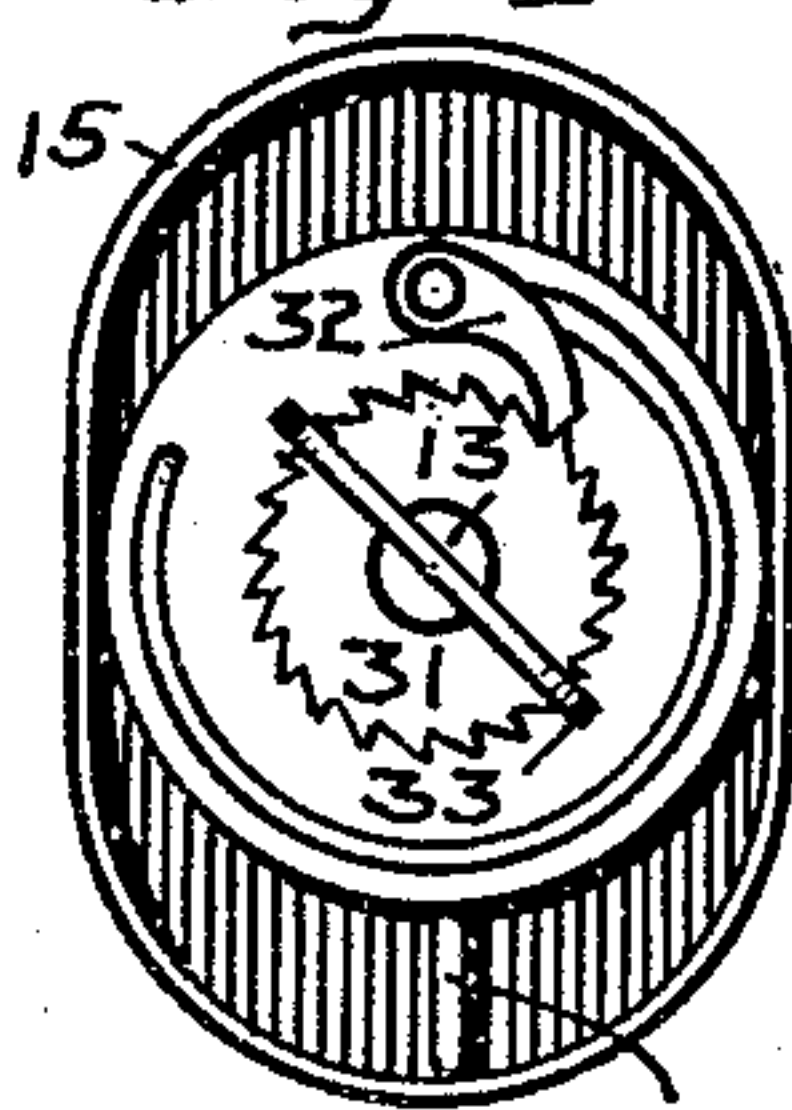


Fig. 5.

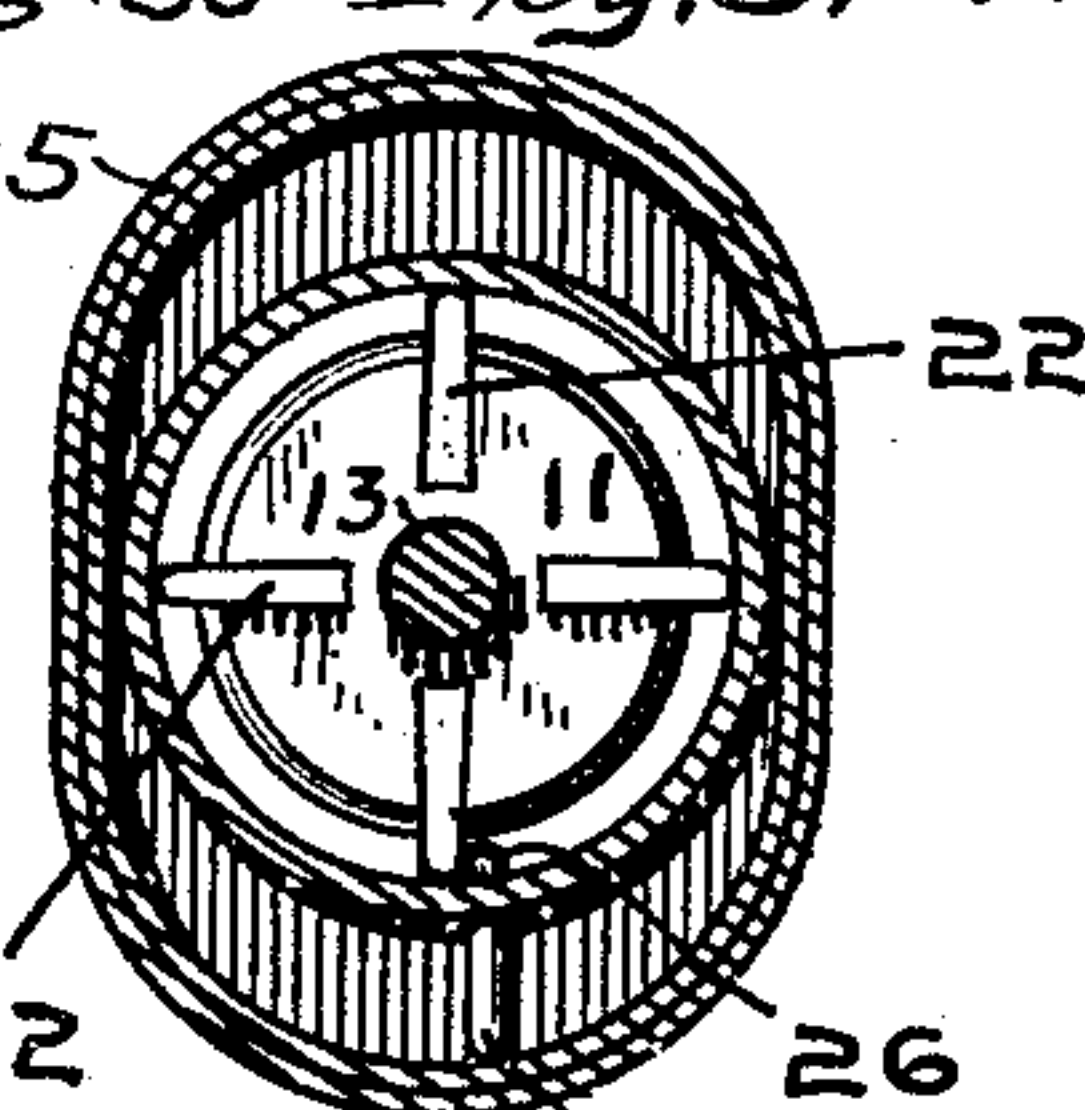
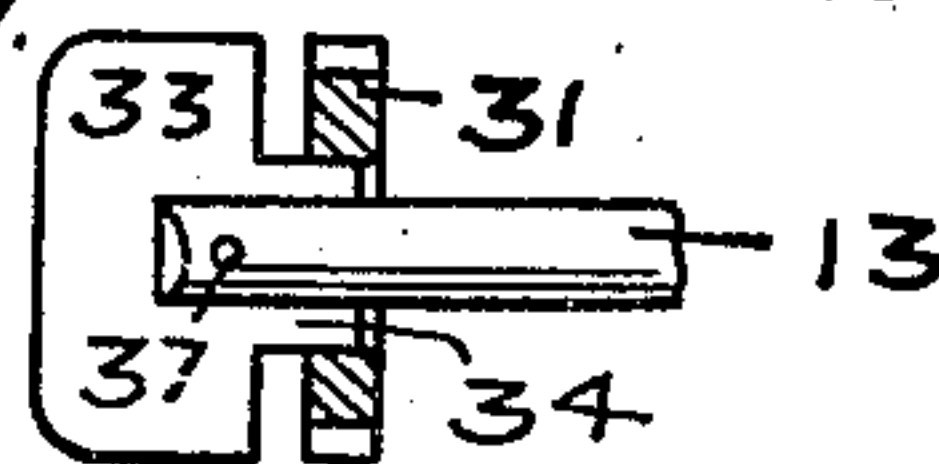
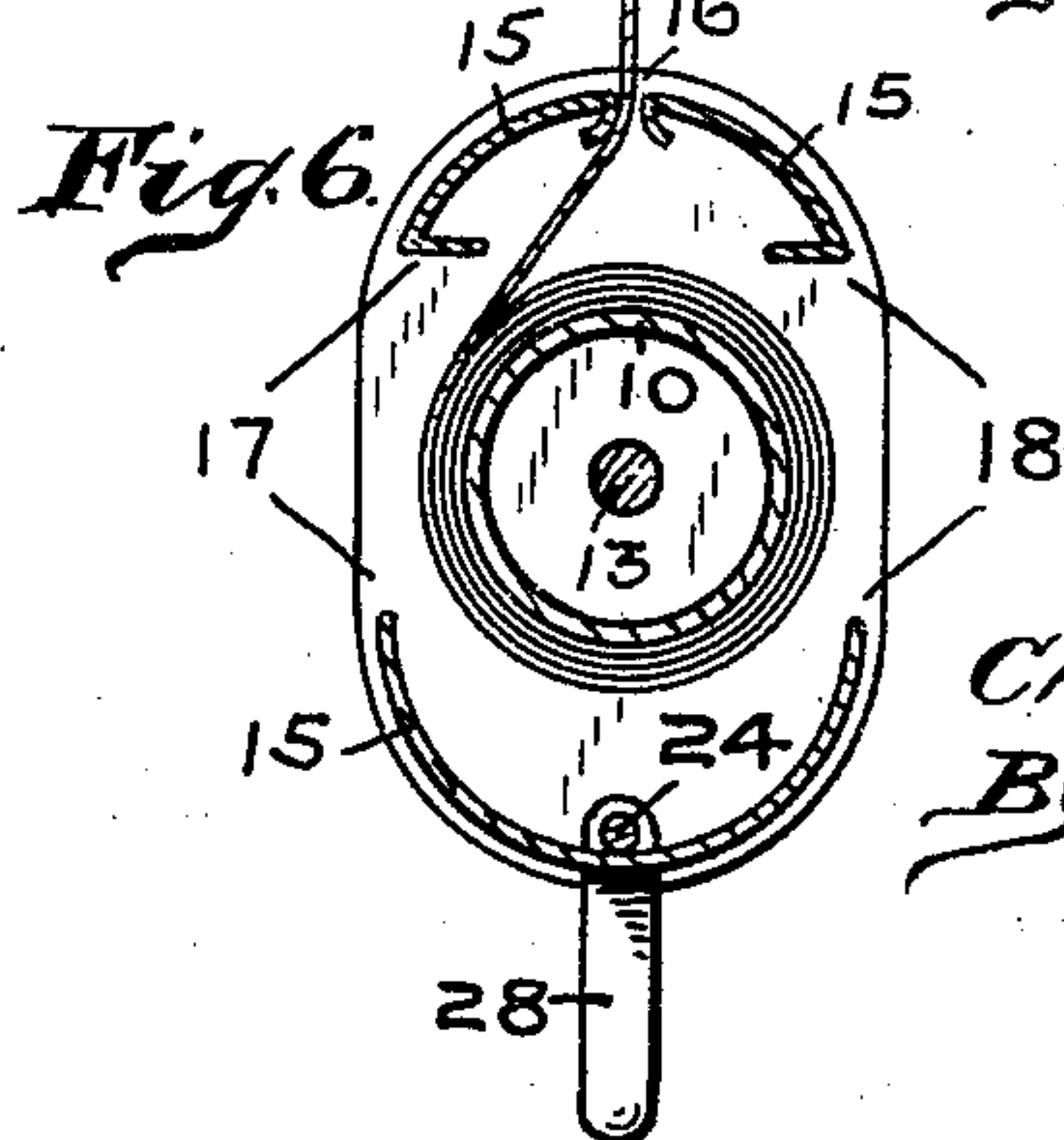


Fig. 6.



Witnesses;
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UNITED STATES PATENT OFFICE.

CHARLES B. CASE, OF INDIANAPOLIS, INDIANA.

WINDOW-SHADE ROLLER.

No. 842,936.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed May 23, 1906. Serial No. 318,420.

To all whom it may concern:

Be it known that I, CHARLES B. CASE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Window-Shade Rollers, of which the following is a specification.

This invention relates to improvements in window-shade rollers; and the object of the invention is to provide an automatic spring rolling attachment to the lower end of the shade, within easy access for adjustments, instead of placing the spring-roller at the top of the shade, as has been the usual method of construction.

The object, further, is to provide means for adjusting the tension of the spring and to provide an inexpensive and neat appearing device.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a window as seen from the inside of the building with my invention applied thereto in operative position. Fig. 2 is a detail in partial vertical section of my invention with parts broken away and removed, so as to bring both ends of the construction on the scale shown within the limits of the drawings. Fig. 3 is a detail in vertical section of the left end of Fig. 2 on a larger scale. Fig. 4 is a view of the end shown in Fig. 3 with the cap removed and looking into the end in the direction of the arrows 4 4 of Fig. 3. Fig. 5 is a vertical section on the line 5 5 of Fig. 3, and Fig. 6 is a vertical section on the line 6 6 of Figs. 2 and 3.

Like characters of reference indicate like parts throughout the several views of the drawings.

7 is the window-shade of any usual and well-known construction and material, which is fastened at its top end to the window-casing 8 in any secure manner, here shown as with tacks; but it may be fastened to a roller or stick which is supported by any of the well-known form of brackets.

10 is a shade-roller of any usual and well-known construction, here shown as a tubular roller, to which the lower end of the shade 7 is fastened in any well-known and suitable way. One end of the roller is closed by means of the plug 11 and the other end by

means of the plug 12. The plugs 11 and 12 have central holes, through the first of which the rod 13 passes, and through the other the pin 14 is introduced. This roller is mounted within an elongated casing, having the sides 15 preferably of sheet metal, with a longitudinal top slot 16 for the passage of the window-shade 7 in reaching the roller within said casing, and in order to lighten and cheapen the device and relieve it of the appearance of clumsiness I prefer to provide the wide slots 17 and 18 on opposite sides of the casing.

The end of the casing adjacent to the roller-plug 12 has the closure 19, which supports the pin 14. The opposite end of the casing has the partition 20 near to but not at the end of the casing, which extends transversely of the latter and is provided with a central circular socket 21, with a central opening just large enough to allow the passage there-through of the rod 13. This end of the roller is supported by the rod 13, and the rod is supported by the partition 20.

The plug 11 has a series of radial arms 22, here shown as four in number, which project past the limits of the plug and roller. The plug is mounted loosely upon the rod 13; but the plug with its arms and the roller all move as one piece. Mounted within the roller 10 is the spirally-wound spring 23, which surrounds the rod 13 and has one of its ends fastened to the rod and the other to the walls of the roller.

Mounted within the casing, upon the bottom of it, is the wire rod 24, one end of which extends through the partition 20 and is bent upwardly at right angles and extends through a slot 25 in the adjacent wall of the socket and is again bent outwardly to form the horizontal end 26, which normally lies in the path of the arms 22, and thus prevents rotation of the roller 10, which is under the tension of the spring 23. The inner end of the wire 24 terminates approximately at the middle of the casing with the lateral extension 28, which extends to the outside of the casing through a slot in the latter. The casing has a similar extension 29, and between the parts 28 and 29 is the spring 30, which presses the wire 24 so its end 26 is normally in the path of arms 22. The extensions 28 and 29 form handholds, which will be grasped in adjusting the shade up or down. By compressing the spring 30 with the pres-

sure of the fingers while grasping the said extensions the shade-roller is released and is free to rotate in the desired direction.

Mounted on the rod 13 on the opposite side of the partition from the roller 10 is the ratchet-wheel 31, the teeth of which are engaged by the pawl 32, carried by the outer wall of the socket 21. The teeth of the wheel and the pawl are placed so as to hold the tension of the spring 23, imparted by rotating the rod 13. 33 is a wing-plate, which is fastened to the rod 13 for convenience in rotating the latter. This is applied to the rod by splitting the end of the latter to receive the plate, and the plate has the extension 34, wider than the diameter of the rod, which enters corresponding grooves in the bore of the ratchet-wheel to key the latter to the rod 13. By fastening the plate 33 to the rod by pin 37 the plate and ratchet-wheel will be fastened to the rod. The walls of the casing extend so as to form a receptacle in which the winding mechanism is housed, and that will be closed with the cap 40.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. The combination of a window-shade, a hollow casing, a shade-roller attached to the lower end of the shade and pivotally mounted within the casing, a rod forming one of the pivots on which the roller is mounted, a spring wound around the rod and having one end made fast to the rod and the other to the roller, radial arms projecting from the roller, and a wire mounted in the casing having a bent end projecting in the path of said arms to form a stop and terminating at its other end in a handle extension outside of the casing.

2. The combination of a window-shade, a hollow casing, a shade-roller attached to the lower end of the shade and pivotally mounted within the casing, a rod forming one of the pivots on which the roller is mounted, a spring wound around and having one end made fast to the rod and the other to the

roller, projections on the roller which extend beyond its periphery, a stop extending parallel with and terminating near the longitudinal center of said roller for engaging and disengaging the said projections; and means attached to said pivoted rod for regulating the tension of the spring in said roller.

3. The combination of a window-shade, a hollow casing, a shade-roller attached to the lower end of the shade and pivotally mounted within the casing, a rod forming one of the pivots on which the roller is mounted, a spring wound around the rod having one end made fast to the rod and the other to the roller, radial arms projecting from the roller at one of its ends, a stop operated from the middle of the casing on the outside of the latter for engaging and releasing the said arms, means attached to said pivot-rod for regulating the tension of the spring in the roller and a removable cap inclosing said tension device.

4. The combination of a window-shade, a hollow casing, a shade-roller attached to the lower end of the shade and pivotally mounted within the casing, a rod having one of its ends slotted to form one of the pivots on which the roller is mounted, a spring wound around the rod having one end made fast to the rod and the other to the roller, means for locking the roller to the casing, a ratchet-wheel mounted on said pivot-rod on the longitudinally-slotted end of the latter, said ratchet-wheel having notches in alignment with the slotted end of the rod, and a wing-plate inserted in the slotted end of the rod having projections entering the notches in the ratchet-wheel and a pin securing the plate to the rod.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 1st day of September, A. D. 1906.

CHARLES B. CASE. [L. s.]

Witnesses:

F. W. WOERNER,
F. WM. WALTKE.