

(No Model.)

E. W. SMITH & E. H. MILLER.
WINDOW SHADE ADJUSTER.

No. 524,985.

Patented Aug. 21, 1894.

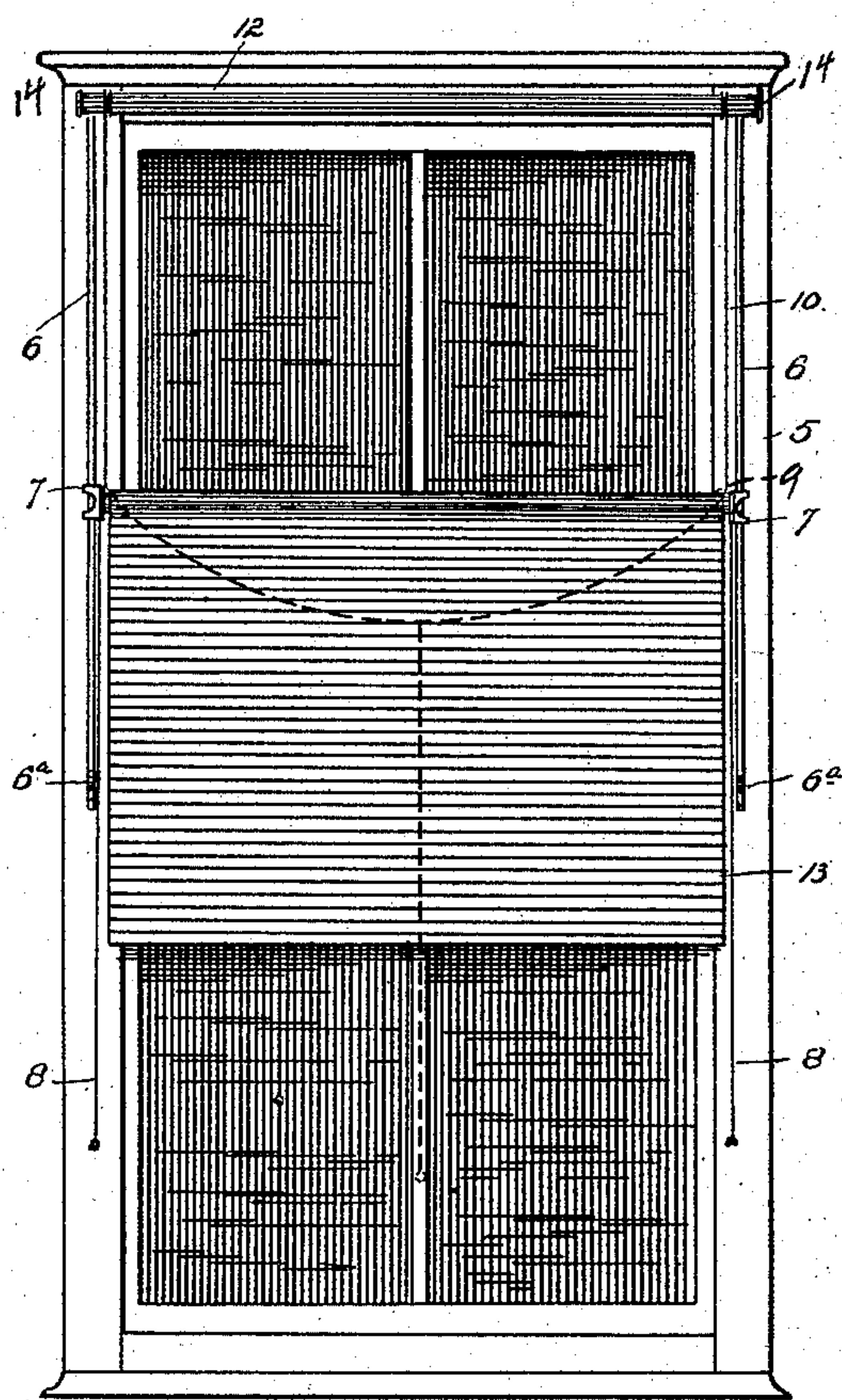


Fig. 1.

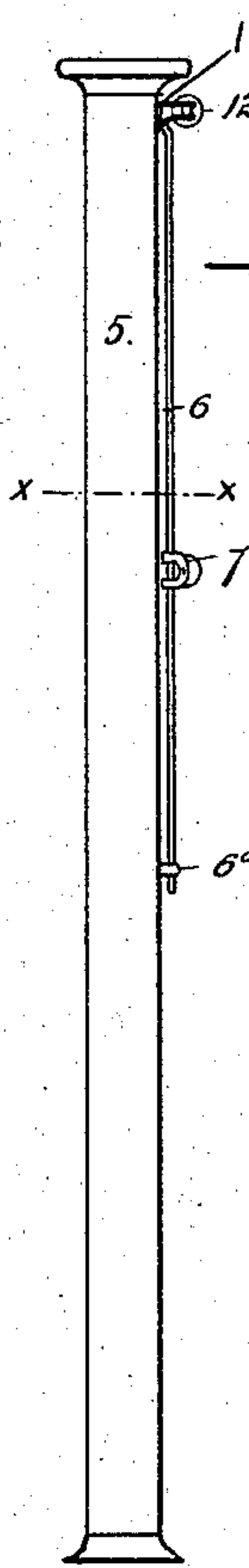


Fig. 2.

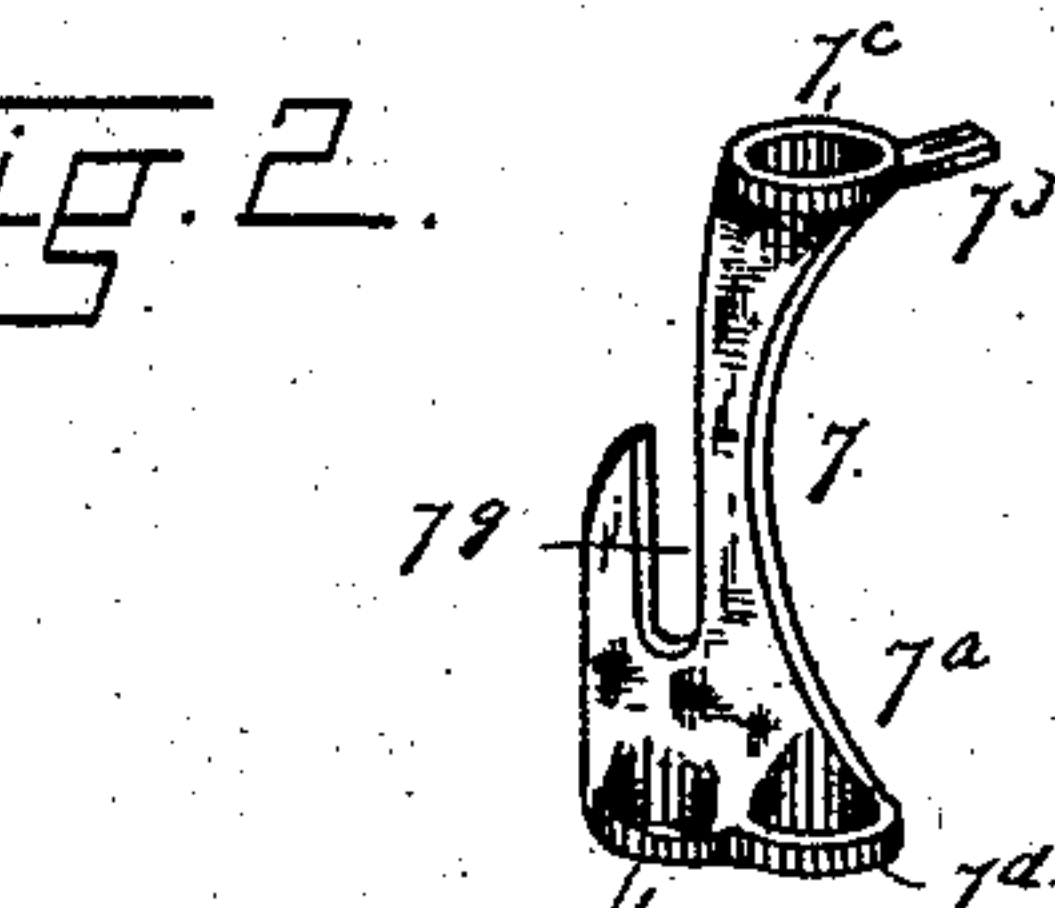


Fig. 3.

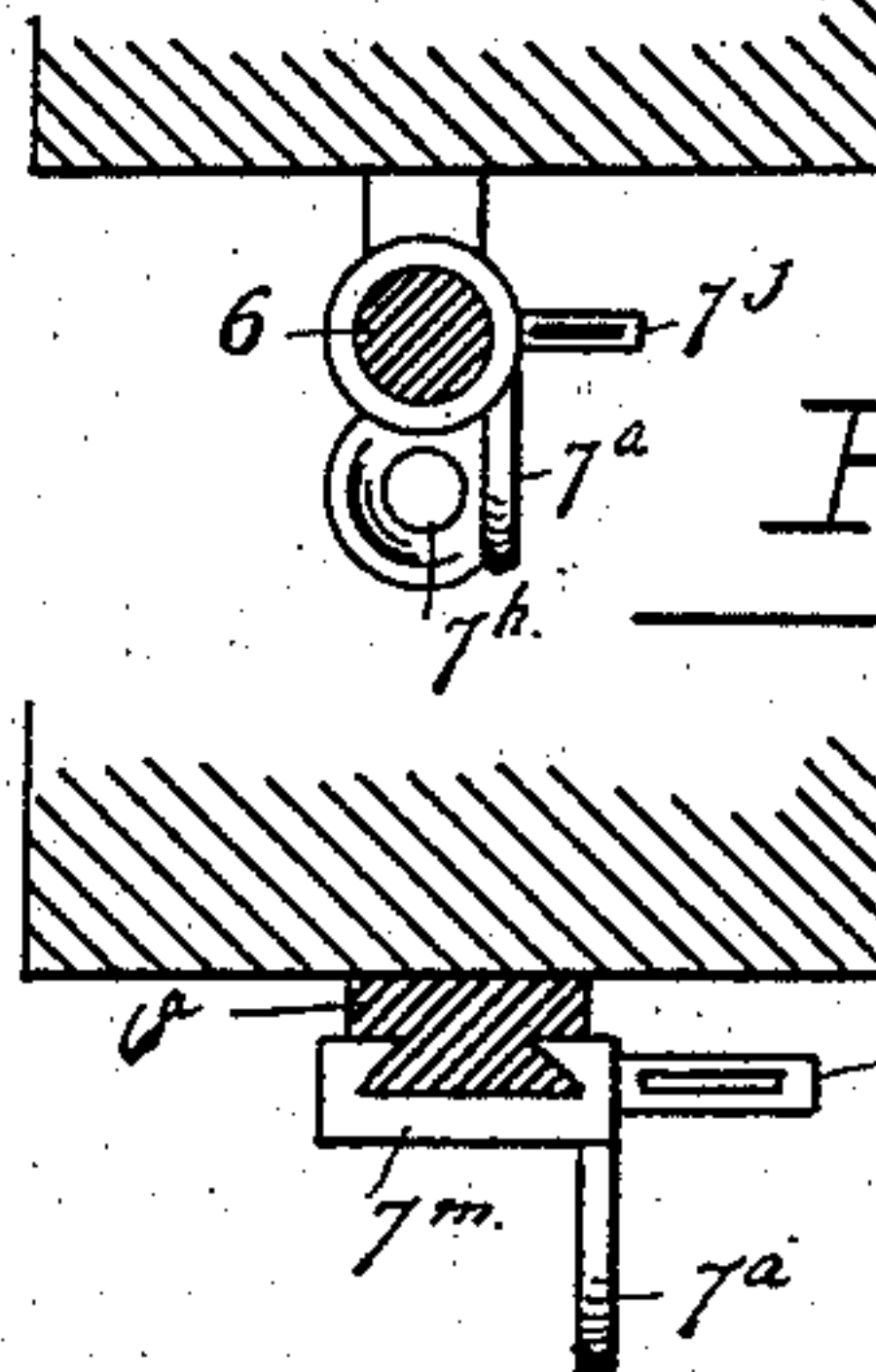


Fig. 4.

Fig. 5.

Fig. 6.

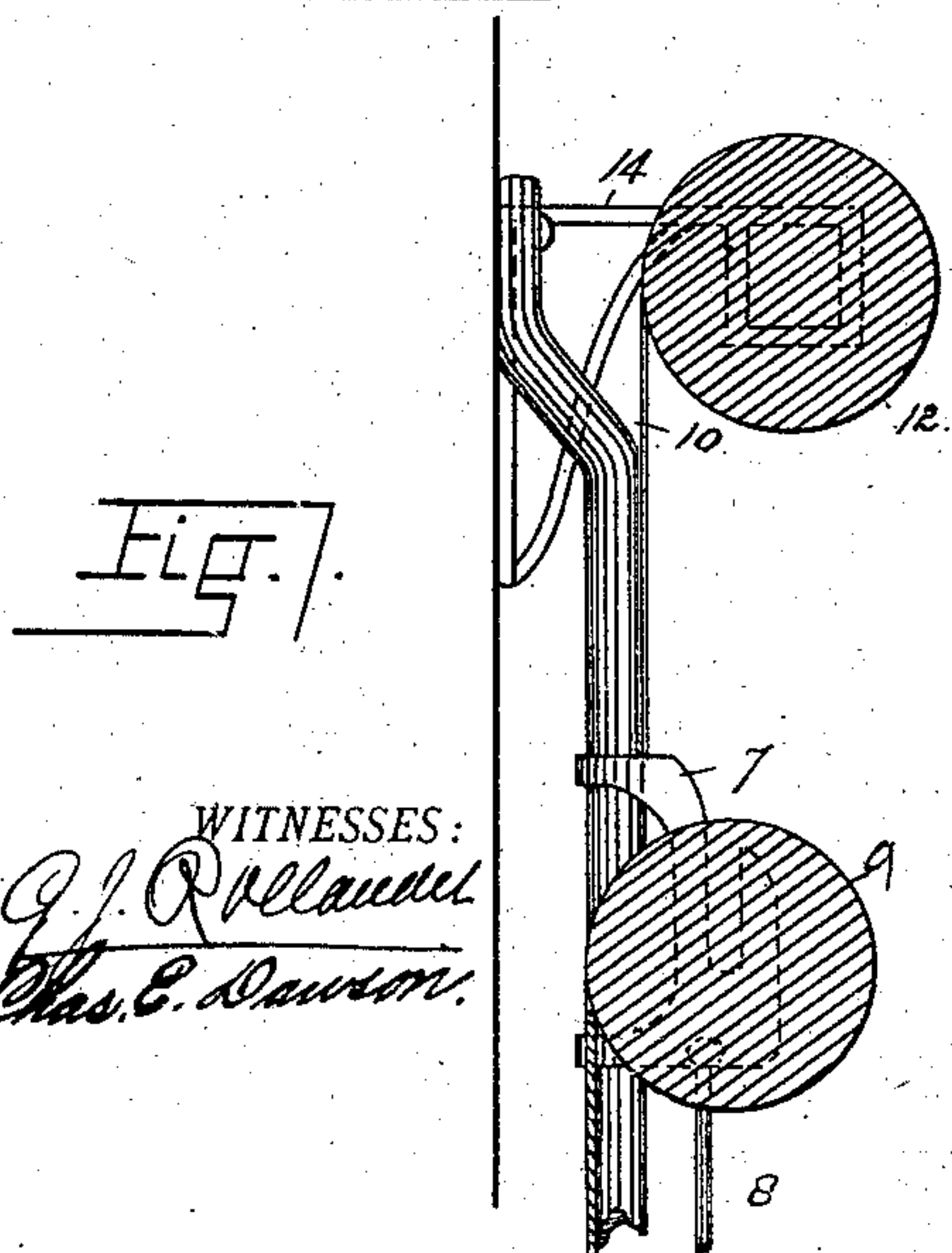
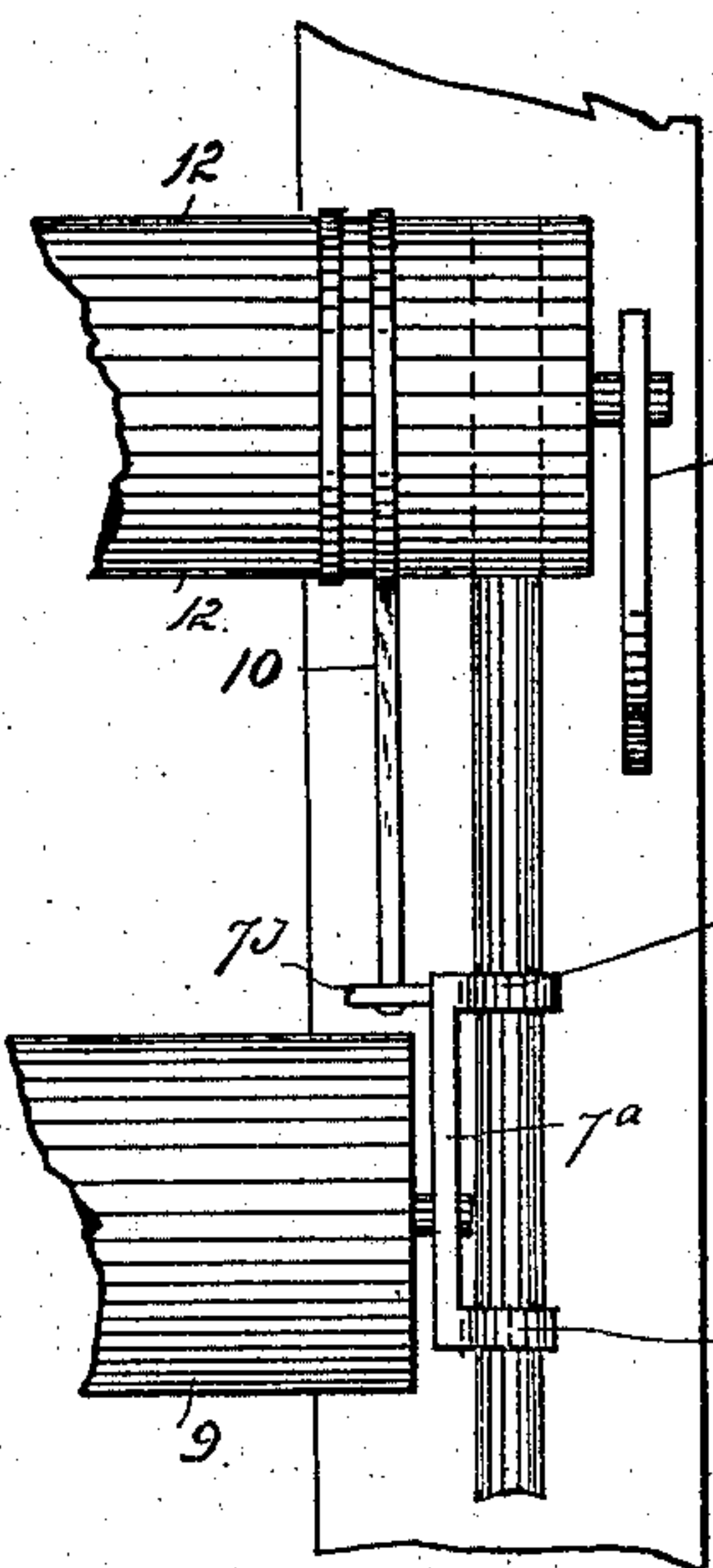


Fig. 7.



WITNESSES:
G. J. Rolland
Chas. E. Dawson.

INVENTORS
E. W. Smith &
E. H. Miller
BY
A. J. O'Brien
ATTORNEY

UNITED STATES PATENT OFFICE.

EARL W. SMITH AND EDWIN H. MILLER, OF DENVER, COLORADO.

WINDOW-SHADE ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 524,985, dated August 21, 1894.

Application filed November 6, 1893. Serial No. 490,207. (No model.)

To all whom it may concern:

Be it known that we, EARL W. SMITH and EDWIN H. MILLER, citizens of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Window-Shade Adjusters; and we do 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 the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in devices for adjusting window shades, whereby the spring roller to which the shade is attached may be raised and lowered at will. In accomplishing this object, we employ an auxiliary or supplemental spring roller attached to the top of the window casing by means of suitable fixtures in which the extremities of the roller are inserted in the usual manner. The curtain roller is connected with this auxiliary roller by means of cords, ropes or other suitable flexible instrumentalities adapted to wind around, or unwind from, the auxiliary roller as the height of the curtain roller is regulated on the window frame. The extremities of the curtain roller engage a special construction of fixture slidingly attached to suitable vertical guide rods or coils made fast to the window frame or casing.

The invention will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a front elevation of a window frame to which our improvements are applied, the shade being shown in place. Fig. 2 is a side elevation of the same. Fig. 3 is a perspective view of the sliding fixture which receives the fast extremity of the shade roller. Fig. 4 is a cross section taken through the guide rod on the line $x-x$, Fig. 2, the sliding fixture being shown in plan view. Fig. 5 illustrates a modified form of construction. Figs. 6 and 7 are front and side views, respectively, illustrating the mechanism on a larger scale. Fig. 8 is a perspective view of the sliding fixture which receives the rotating extremity of the shade roller.

Similar reference characters indicating corresponding parts or elements in these views, let the numeral 5 designate the window frame to which is attached the vertical rods 6, one on each side. These rods may be of any suitable length. Their upper extremities must be attached to the top of the frame, and they should preferably extend downward to a point somewhat below the lower end of the upper sash. To each of these rods is attached a fixture 7, consisting of the body part 7^a provided with the extremities 7^c and 7^d apertured to receive the guide rod. These fixtures are further provided with central apertures 7^e for the reception of the extremities of the curtain roller 9, and eyes 7^h formed at their lower extremities for the attachment of the hand cords 8 for use in adjusting the height of the roller. The fixtures 7 are also provided with an apertured lug 7ⁱ for the attachment of the lower extremities of the suspension cords 10, the upper extremities of these cords being made fast to the auxiliary roller 12 upon which, and from which the cords are adapted to wind and unwind during the adjustment of the roller 9 carrying the shade 13. The roller 12 is supported by suitable stationary fixtures 14 attached to the casing.

In using the modified form of sliding fixture shown in Fig. 5, the window casing is provided with the vertical tracks 6^a which form a sort of dove-tail connection with suitable shoes 7^m which take the place of the parts 7^c and 7^d in the form shown in Fig. 3.

From the foregoing description of the operation, our improvement will be readily understood. The spring rollers 9 and 12 may be of any approved construction, as nothing is claimed thereon except in combination.

The important use of our invention is to enable the occupant of a room to lower the shade from the top so as to allow light or air to enter freely through, or above, the upper sash of the window, while the view through the lower sash is completely cut off or obstructed by the shade. In adjusting the shade for this purpose, the hand cord 8 on either side of the window, may be grasped by the hand, when the roller 9 and its attachment may be raised or lowered at will, and as easily as the curtain can be adjusted on its roller, the sliding fixtures moving freely on their guides,

while the suspension tapes wind around, or unwind from the roller 12 supported by the stationary fixtures 14.

The rods 6 are provided with suitable stops 5 6^a located near their lower extremities to prevent the sliding fixtures from slipping off the guide rods in case the shade roller should be accidentally pulled down too far.

In further explanation of the operation of 10 the mechanism it may be stated that in adjusting the shade upon its roller, the fast extremity of the shade roller acting upon its fixture, causes the latter to "bind," so to speak, upon its rod or track by reason of the 15 recoil of the spring within the roller and the tendency of the fast extremity of the roller to turn within its bearing. This tendency causes sufficient friction between the fixture and its guide rod to prevent the shade roller 20 from moving vertically during the adjustment of the shade thereon. To this end, the sliding fixture 7 (see Fig. 3) which locks the roller extremity from rotation is cut away between its extremities so that the body part 25 thereof does not engage the guide rod, thus causing the extremities which engage the rod to bind more tightly under the influence of the tendency mentioned, thus locking the shade roller against vertical movement during 30 the adjustment or the winding and unwinding of the shade. On the other hand, the roller may be easily adjusted vertically by the use of the hand cords 8, since in this case, the sliding fixtures move freely upon their guides.

35 Instead of having two separate hand cords, it is preferable to have a single cord whose extremities are respectively connected with the two fixtures 7 and provided with a central depending hand piece as indicated by 40 dotted lines in Fig. 1, since a central pull upon the fixtures,—a pull from a point midway between them, will be productive of better results than can be obtained by using either hand cord separately.

45 Having thus described our invention, what we claim is—

1. In a window shade adjuster, the combination with the shade and its spring roller, of the vertical stationary guide rods, the auxiliary roller supported in stationary bearings, 50 the suspension tapes adapted to wind around the auxiliary roller, the sliding bearings centrally apertured to receive the shade roller extremities, one of which bearings is fashioned to allow its engaging roller extremity 55 to rotate, while the other bearing is formed to lock its engaging roller extremity from rotation, the last named bearing being cut away between its extremities to clear the guide rod 60 which the extremities of the bearing are apertured to receive, whereby the bearing is caused to bind on the guide rod and lock the shade roller from vertical movement during the adjustment of the shade thereon, substantially as described. 65

2. In a window shade adjuster, the combination with the shade and its spring roller, of the vertical stationary guide rods, the auxiliary roller supported in stationary bearings, 70 the suspension tapes adapted to wind around the auxiliary roller, the sliding bearings centrally apertured to receive the shade roller extremities, one of which extremities is locked in its bearing, said locking bearing being cut away between its extremities to clear the 75 guide rod which the extremities of the bearing are apertured to receive, whereby the bearing is caused to bind on the guide rod and lock the shade roller from vertical movement during the adjustment of the shade, and 80 hand cords attached directly to the sliding bearings, whereby the vertical adjustment of the shade roller may be accomplished, substantially as described.

In testimony whereof we affix our signatures 85 in the presence of two witnesses.

EARL W. SMITH.
EDWIN H. MILLER.

Witnesses:

G. J. ROLLANDET,
CHAS. E. DAWSON.