

J. R. FINNEY.  
Shade and Curtain Rollers.

No. 227,889.

Patented May 25, 1880.

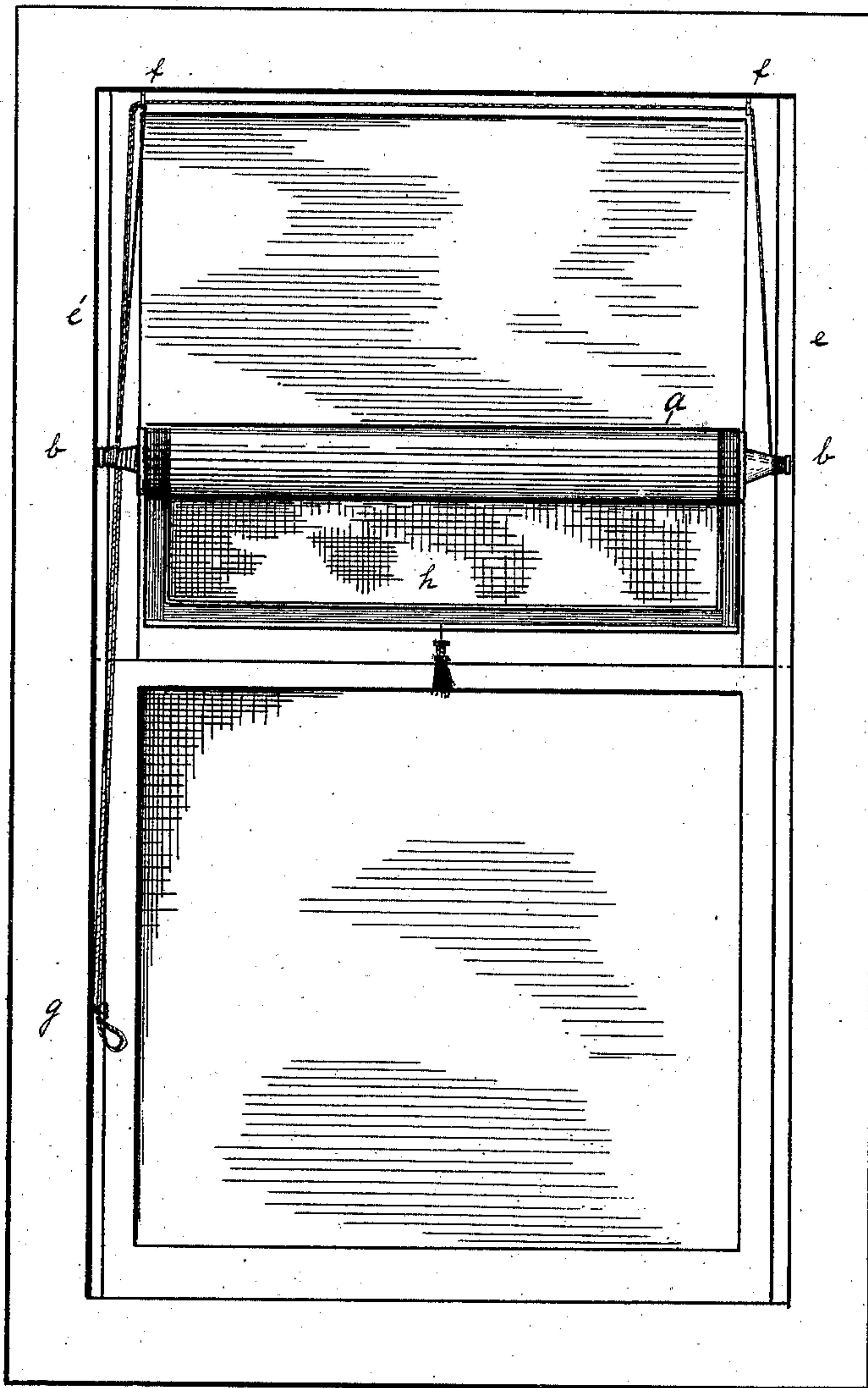


Fig. 1.

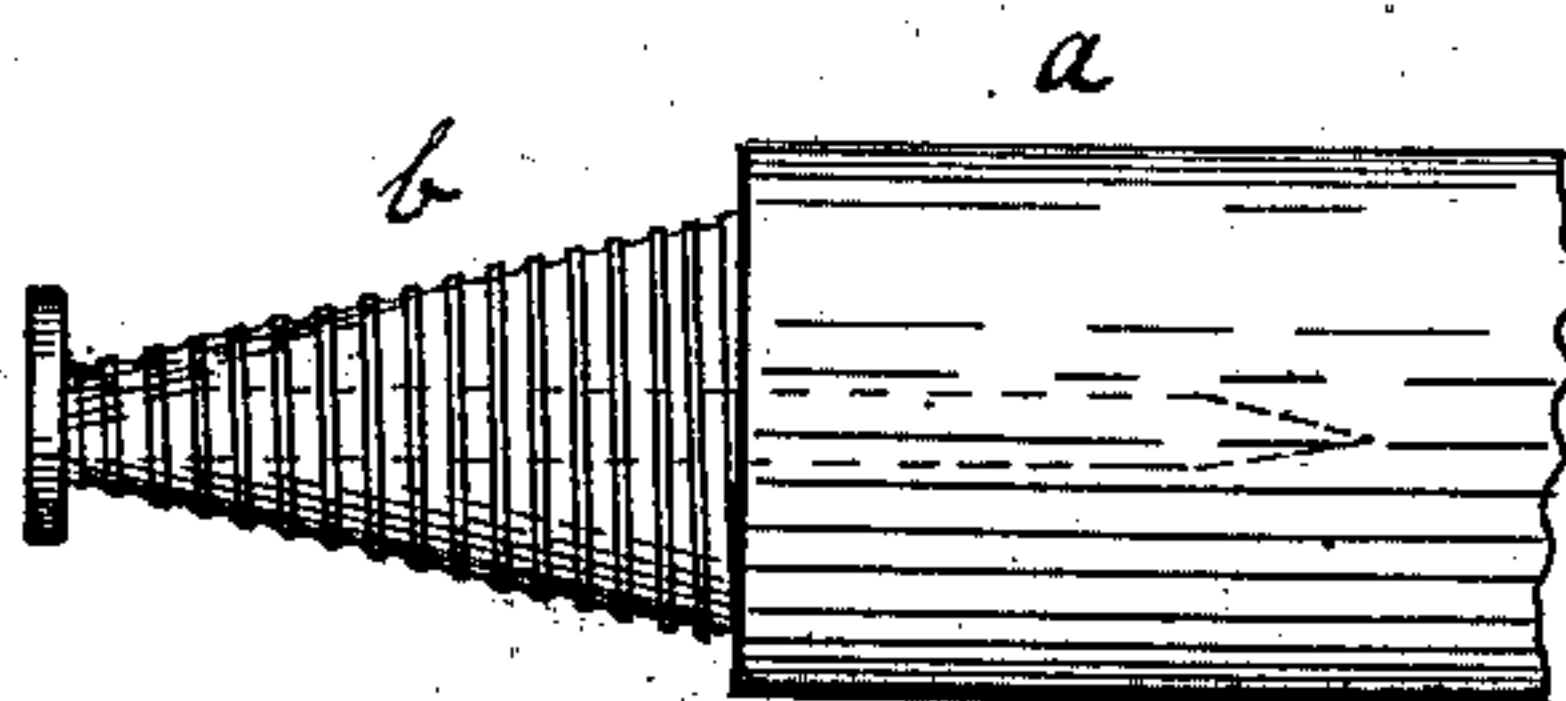


Fig. 2.

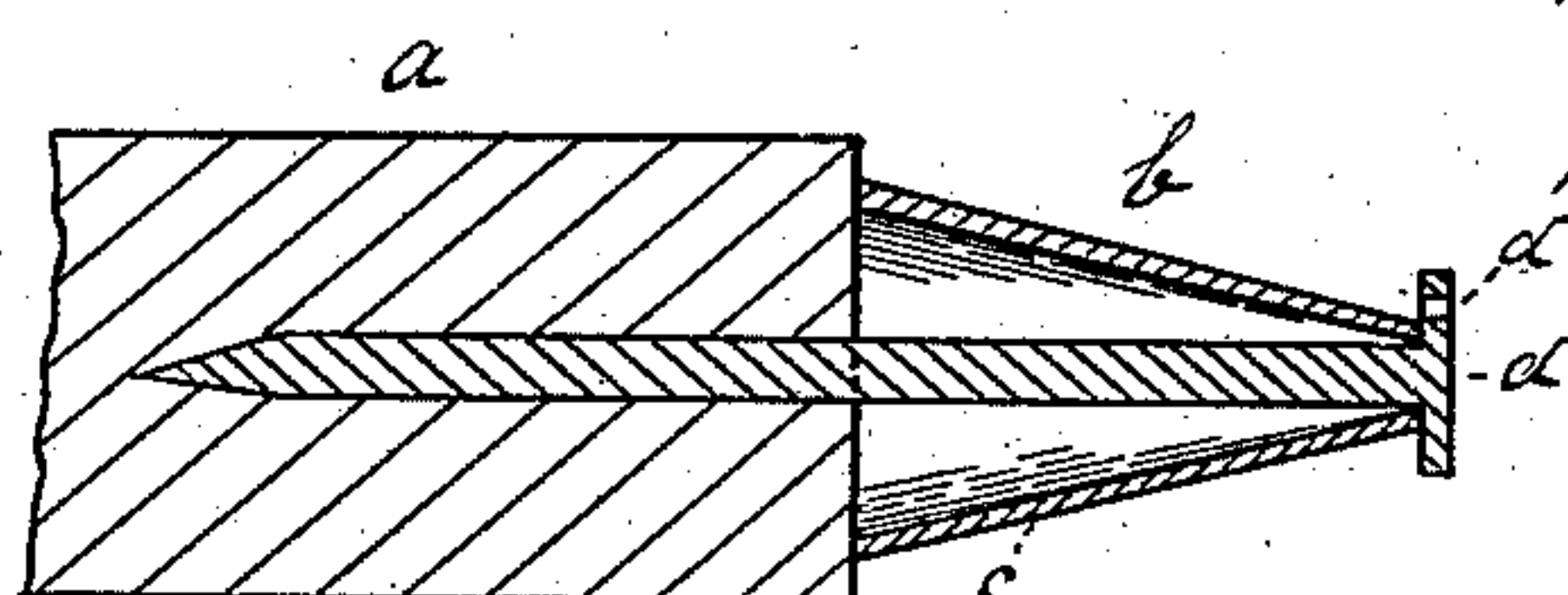


Fig. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

JOSEPH R. FINNEY, OF PITTSBURG, PENNSYLVANIA.

## SHADE AND CURTAIN ROLLER.

SPECIFICATION forming part of Letters Patent No. 227,889, dated May 25, 1880.

Application filed February 24, 1880.

*To all whom it may concern:*

Be it known that I, JOSEPH R. FINNEY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Shade and Curtain Rollers; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an improvement in rollers for shades or blinds; and it consists in providing the ends of the rollers with a conical axis, to which is fastened a cord which leads thence to the top of the window-frame, so arranged that when the shade is unrolled and lowered the roller is caused to ascend, and thus the shade covers the entire window, or so much of it as is desired.

The chief objection heretofore found to this form of blind has been that, the cords winding unevenly on the axis of the roller, one side of the blind is often drawn higher than the other, and it becomes a difficult matter to adjust it evenly with the windows. By the use of conical axes to the ends of the rollers the objection to this form of blind is removed, and it becomes by far the most simple and convenient form, superior to the spring and other form of blinds, in that it is more easily adjusted and not liable to be put out of order.

I will now describe my invention so that others skilled in the art may manufacture the same, reference being had to the accompanying drawings, forming a part of this specification, in which.

Figure 1 is a plan view of a window-frame provided with my improved curtain. Figs. 2 and 3 are detached views of the conical axes of the roller.

Like letters of reference indicate like parts in each.

*a* is the shade-roller, on each end of which is attached a conical axis, *b*. These axes may be formed by fastening a hollow frustum of a cone, *c*, to the end of the roller by means of a nail, *d*, provided with a large head, the base of the frustum being placed against the end of the roller, while the nail passes through the smaller and outer end of the frustum into the roller, fastening the frustum thereto. In the flat head of the nail *d*, which fastens the frustum to the roller, is a small hole, *d'*, so as to enable the cord to be fastened to the axes

of the roller. The large flat head of the nail *d* acts as a stop and prevents the cord from running off the axis. Passing through and attached to the holes *d'* in the heads of the nails *d* are cords *e* and *e'*, which are wound round the axes *b*, and extend thence to the top of the window-frame, where they pass through the hooks *f* and *f'*, (the cord *e* passing through both hooks,) and thence down the side of the window-frame to the nail or cleat *g*, where they are fastened. The object of the cords extending down the window-frame is to enable the adjusting of the roller at any point that may be desired. Instead of this arrangement, the cords *e* and *e'* may be attached to rings placed in the top of the window-frame.

The operation of the device is as follows: When the curtain *h* is pulled down or lowered, the roller, turning on its axes, causes the cords *e* and *e'* to wind on the axes *b*, the conical surface of which prevents the cords from overlapping each other, and thus causes the roller to ascend evenly toward the top of the window, while the end of the curtain *h* descends toward the bottom of the window, and as the cord winds upon conical axes the periphery of which increases in size toward the end of the roller, the shade and the roller balance each other at every point.

If the cords are so arranged as hereinbefore described the roller may be placed at any point desired by means of the cords leading to the cleat *g*.

If desired, the surface of the conical axes may be provided with a screw-thread, as shown in Fig. 2, to insure the cords running up the surface of the cone.

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

1. A curtain or shade roller having conical axes, in combination with a single cord or single set of cords attached to the axes, which cord or cords serve the double purpose of suspending and rolling up the curtain, substantially as and for the purpose specified.

2. A curtain or shade roller provided with conical axes, in combination with a single cord or single set of cords attached to the axes, said cords passing through hooks at the top of the window-frame, whereby the curtain may be

raised or lowered, as well as suspended and rolled up, by the same set of cords, substantially as specified.

3. A shade or curtain roller having conical  
5 axes, said axes consisting of frustums of cones attached to the roller by nails having wide or projecting heads, substantially as described.

4. A curtain-roller of the class herein described, said roller provided at its extremities  
10 with tapering or conical axes and with means

for attaching the suspension-cord at the least diameter of the axis, substantially as and for the purpose specified.

In testimony whereof I, the said JOSEPH R. FINNEY, have hereunto set my hand.

JOSEPH R. FINNEY.

Witnesses:

JAMES K. BAKEWELL,  
FRANK N. SMITH.