

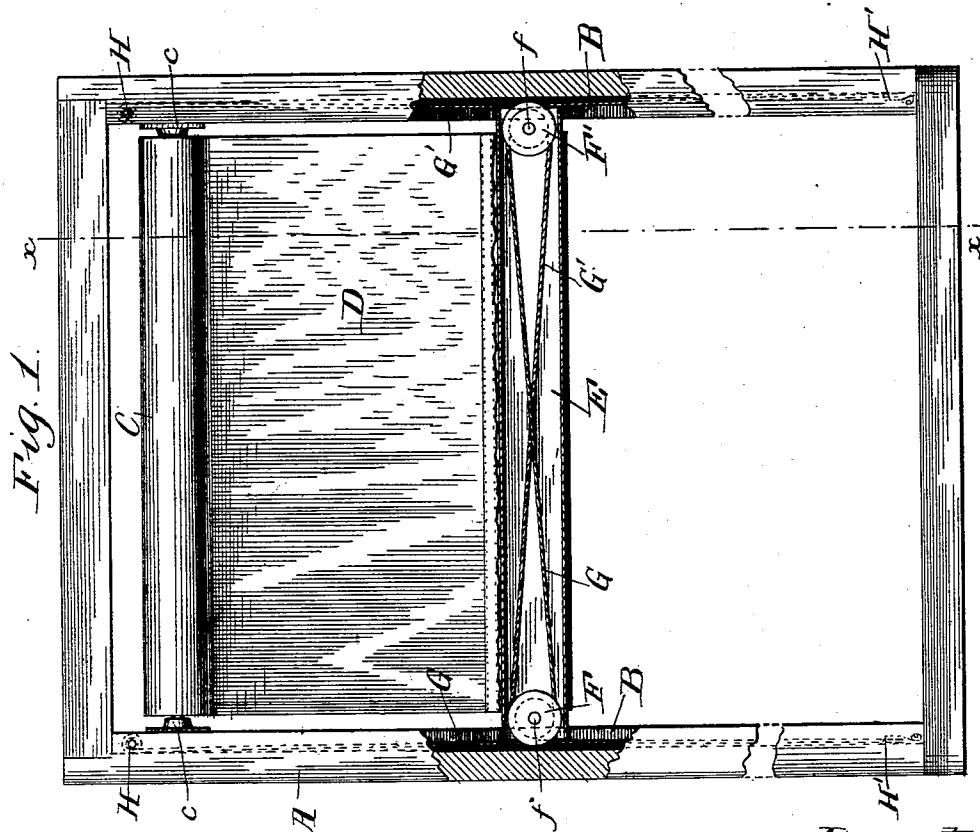
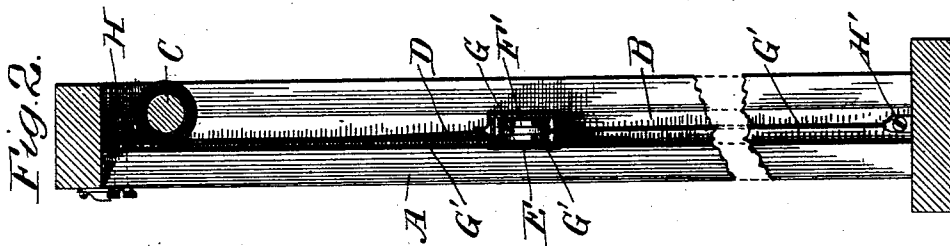
(No Model.)

2 Sheets—Sheet 1.

R. P. SMITH.
GUIDE FOR SPRING ACTUATED SHADES.

No. 564,721.

Patented July 28, 1896.



Witnesses,
Chas. W. Parker.
G. A. Remington

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(No Model.)

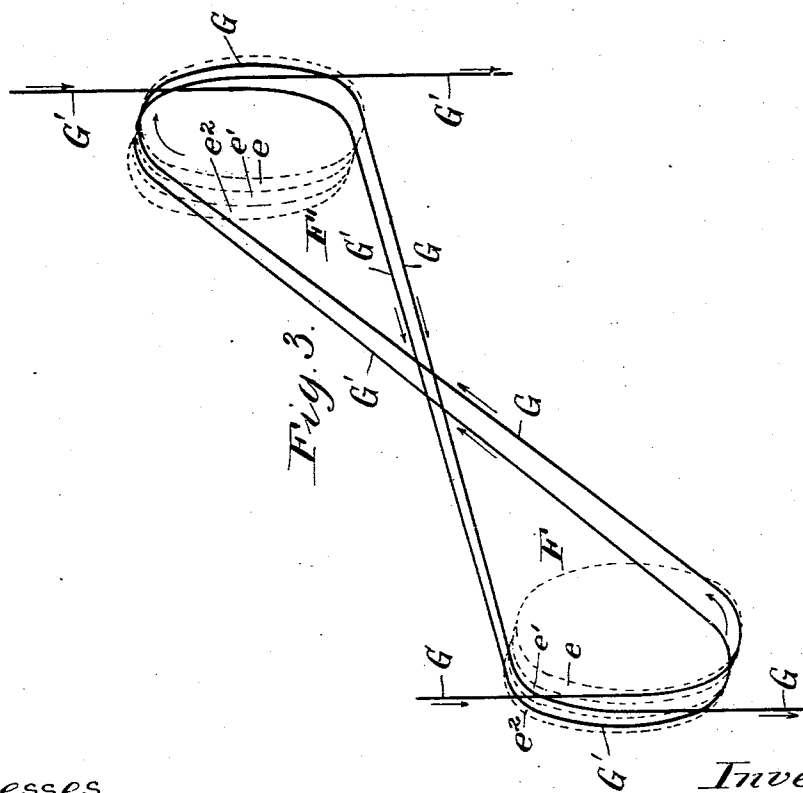
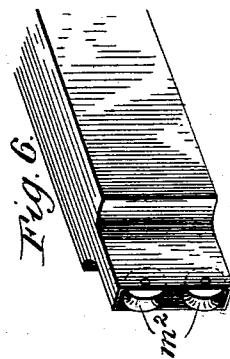
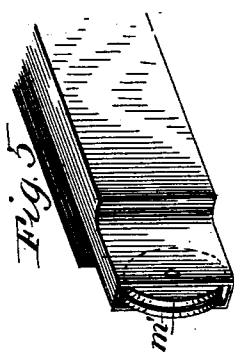
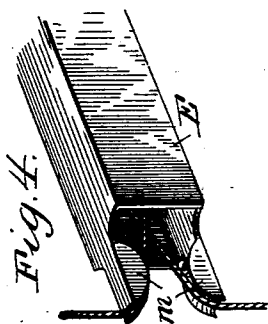
2 Sheets—Sheet 2.

R. P. SMITH.

GUIDE FOR SPRING ACTUATED SHADES.

No. 564,721.

Patented July 28, 1896.



Witnesses,
Chas. W. Parker.
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Inventor,
Robert P. Smith,
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UNITED STATES PATENT OFFICE.

ROBERT P. SMITH, OF PORTLAND, MAINE, ASSIGNOR TO EDWARD T. BURROWES, OF SAME PLACE.

GUIDE FOR SPRING-ACTUATED SHADES.

SPECIFICATION forming part of Letters Patent No. 564,721, dated July 28, 1896.

Application filed October 31, 1895. Serial No. 567,541. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. SMITH, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Guides for Spring-Actuated Shades; and I do hereby 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.

This invention relates to an improvement in spring-actuated shade-guides, and it is embodied in the construction and arrangement hereinafter described, and definitely pointed out in the claims.

The aim and purpose of the invention is the provision of improved means for guiding the shade and maintaining the stick or an extension thereof in the guide-grooves.

The invention primarily is intended for use in connection with car-windows and doorways, and is of that class of shades wherein is employed means for preventing the flapping in and out of the curtain or shade.

The particular improvement resides more directly in that class of guides wherein a flexible cord or band is employed with which the shade-stick engages.

Generally speaking, the improvement consists in the employment of side cords or bands and means associated therewith for moving the opposite ends of the stick simultaneously irrespective of the point at which the pressure is applied.

The aim and objects of the invention are attained by the construction illustrated in the accompanying drawings, wherein like letters of reference designate corresponding parts in the several views, and in which—

Figure 1 is an elevation of a window-casing, a spring-actuated shade, and the improvement properly applied, the shade-stick and sides of the casing being in sectional elevation to expose the guide mechanism. Fig. 2 is a cross-section on the line *xx*, Fig. 1. Fig. 3 is a diagrammatic view showing the position of the guide-cords. Fig. 4 is a view of a slightly-modified form, and Figs. 5 and 6 are modified forms of the end of the stick.

In the drawings, A designates the window-frame, having the vertical side grooves B.

C designates a spring-actuated shade-roller of any well-known type, the same being mounted in stationary brackets *c* on the casing.

D designates the flexible shade, on the lower end portion of which is mounted a hollow shade-stick E, preferably of oblong rectangular cross-section. The length of the stick E is greater than that of the shade and the ends thereof project into and move in the grooves B. Loosely mounted on suitable transverse axles *f*, secured in the stick at opposite ends, are the grooved pulleys or wheels F F', each having three circumferential grooves *ee'e'*. These pulleys extend slightly beyond the ends of the stick, as shown.

G G' designate the guide cords, cables, or bands, which may be of any suitable material. These cords are secured at their upper ends, as at H, to the ends of the casing immediately above and in line with the grooves B. They then extend down, pass under the wheels F F', respectively, the cord G resting in the groove *e* of wheel F and the cord G' resting in groove *e'* of wheel F'. The cords are then passed at an upward incline through the stick in opposite directions, around the opposite wheels resting into grooves *e* and *e'*, respectively, of the opposite wheels and are then carried back at an upward incline over the central grooves of the respective wheels, from which point, owing to the wheels projecting beyond the stick, they are carried directly down the grooves B and secured at H' to the lower end wall of the grooves.

By the above-described arrangement of pulley and cords it will be seen that the opposite end of each cord is secured on the same side of the frame and that the cords are looped over both pulleys, so that as one end of the stick is raised the cord in the groove at that side will be moved over the pulley at that end of the stick and then over the opposite pulley, thereby rotating the opposite pulley and causing the same to move in a direction to move the opposite end of the stick up proportionately with the up movement of the other end or end on which pressure is ap-

plied. The ends of the stick are thus maintained in their proper position in the grooves B and the curtain held from flapping in or out.

As the cords are drawn tight the friction will positively drive the respective pulleys, preserving the parallelism of the roller and stick, and cause an absolute simultaneous and equal movement of the opposite ends of the stick.

It will be noticed that as between the stick proper and cords there is practically no friction, owing to the pulleys being journaled to rotate freely.

The feature of driving the wheels by the movement of either cord or either end of the stick I regard as of great importance, and it is to be understood that I do not limit myself to the particular form shown and described.

In some cases it may be found desirable to reduce the thickness of the ends of the stick, so that the width of the groove B may be lessened. To accomplish such it is only necessary to set the grooved wheels back, reduce the end sections and place therein at the extreme ends the friction-blocks *m*, as shown in Fig. 4, or the two large grooved wheels *m'*, as shown in Fig. 5, or the two small wheels *m''*, arranged one above the other, as shown in Fig. 6. Many other modified forms could be suggested and many changes in the construction and arrangement of the various parts can be

made without in the least departing from the nature and principle of my invention.

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

1. In a guide for spring-actuated shades, the combination with a casing and a spring-actuated shade, of a hollow stick on the shade, grooved wheels journaled in the stick on opposite sides of the center thereof, and flexible guides secured to the casing entering the stick and passing respectively over both wheels, substantially as described.

2. In a guide for spring-actuated shades, the combination with a casing and a spring-actuated shade, of a hollow stick on the shade, grooved wheels journaled in the stick at opposite ends, and separate guide-cords secured to the casing on opposite sides, each passing into the stick below the adjacent wheel, upwardly through the stick over the opposite wheels, back through the stick over the adjacent wheels, and carried down to the end of the casing, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT P. SMITH.

Witnesses:

H. W. ROBINSON,
E. A. STERLING.