

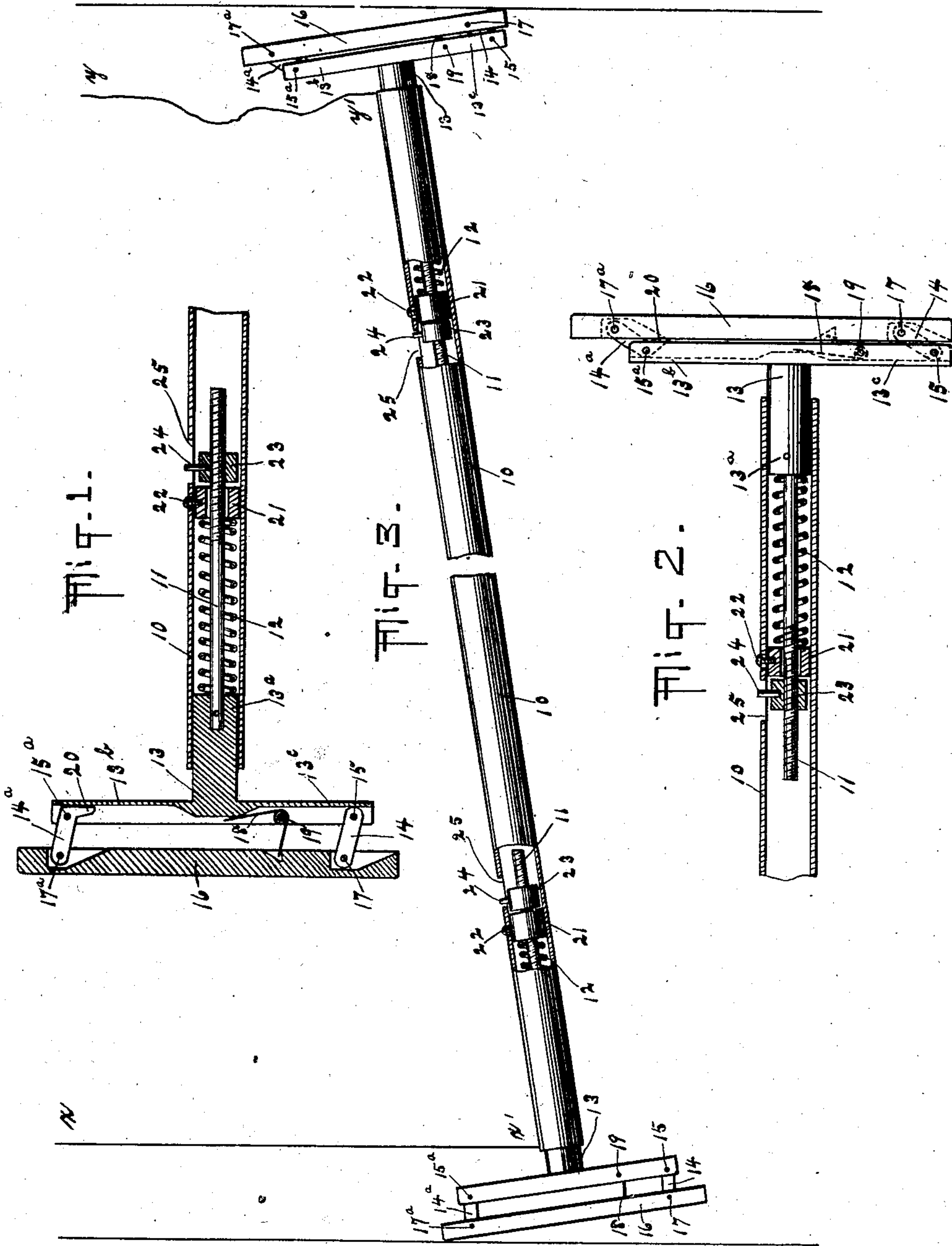
No. 721,193.

PATENTED FEB. 24, 1903.

C. L. HOPKINS.
SHADE HOLDING DEVICE.
APPLICATION FILED FEB. 12, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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E. L. Hopkins.

Inventor:
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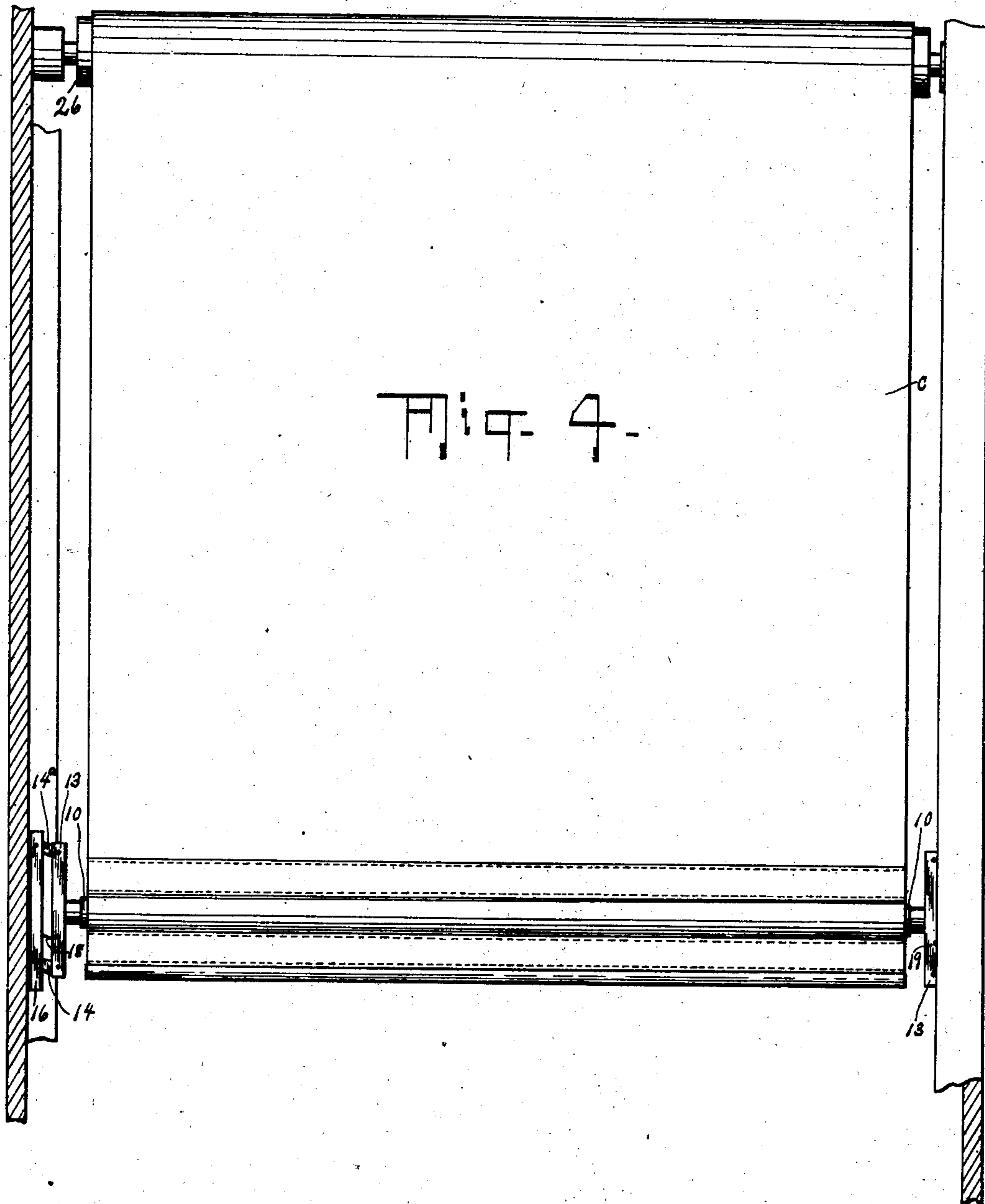
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Witnesses:
John F. Madole.
James Duffy

Inventor:
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UNITED STATES PATENT OFFICE.

CHARLES L. HOPKINS, OF ALBANY, NEW YORK.

SHADE-HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 721,193, dated February 24, 1903.

Application filed February 12, 1902. Serial No. 93,688. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. HOPKINS, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Shade-Holding Devices, of which the following is a specification.

The invention relates to improvements in that class of devices which are adapted to be secured to the lower edge of a spring-actuated curtain or shade to guide the shade and hold it at any desired point against the tendency of the spring shade-roller to draw it up.

More particularly, this invention relates to that class of shade-holding devices wherein is employed a spring-extended stick, carried in a pocket formed in the material of the shade, having friction-shoes at the ends of the stick adapted to move in grooves in the window-frame.

The principal objects of this invention are to provide means whereby the shade may be adjusted by grasping the shade-stick at any point thereof and moving the shade up or down without danger of the shade-holding device being thrown from the grooves in the window-casing and which will automatically right itself if left in an inclined position.

In the drawings, Figure 1 is a sectional view of one end of a shade-holding device embodying my invention, showing the parts in their normal positions or in the positions they will assume when the shade is stationary. Fig. 2 is a view, partly in section, of one end of the device with the shoe thrown upwardly and inwardly or toward the head. Fig. 3 is a broken elevation of the device, partly in section, showing its action in righting itself. Fig. 4 is an elevation of a shade fitted with this form of shade-holding device, the spring shade-roller also being shown.

In the drawings, in which *c* is the shade or curtain fitted with a spring shade-roller 26, 10 is the usual tube forming the stick and carrying the other parts. Within the tube and having a reciprocating movement therein is the spindle 11, surrounded by the coiled spring 12. The spindle 11 carries at its outer end the head 13, having a cylindrical part 13^a, extending into the tube and against which the spring 12 thrusts upwardly and downwardly extending arms 13^b and 13^c. Carried

by each of these arms is a short bar or rod 14 and 14^a, respectively. One end of each rod is pivoted to the head 13 by a pin 15 and 15^a, respectively. The outer end of each of these rods 15 and 15^a is pivoted to the shoe 16 by a pin 17 and 17^a, respectively. The shoe 16 as thus connected to the head 13 is permitted an up-and-down movement with relation to the head 13 and may be close to the head 13, as shown in Fig. 2, or at a certain distance therefrom, as shown in Fig. 1. The spring 18, carried by the pin 19, tends to throw the shoe 16 downwardly and outwardly. The shoe 16 is limited in its downward movement by the foot-shaped projection 20 on the rod 14^a.

Within the tube 10 and forming a seat for the spring 12 is a sleeve 21, secured in place by the screw 22. Another sleeve 23, threaded upon its inner surface to engage threads upon the spindle 11, is arranged to have reciprocating movement within the tube 10 and to abut the sleeve 21 when the spindle 11 and head 13 are thrust outwardly by the spring 12, thus limiting the outward thrust of the spring 12 upon the head 13. This movable sleeve 23 is prevented from rotating by the pin 24, which moves in a slot 25 in the tube 10. This arrangement forms a convenient means for adjusting the device to windows of varying widths. By turning the head 13 to the right or left the spindle 11 is screwed into or out of the sleeve 23 and the device is thus shortened or lengthened, as desired.

The principal difficulty to be overcome in constructing a shade-holding device employing elongated friction-shoes is to provide means whereby when the stick is drawn down by one end the other end may descend of itself and means whereby when the device is forced into an angular position and thus left the spring shade-roller may throw the device back to its normal position. In the shade-holding device herein described and shown in the drawings the first of these objects is attained by providing such an arrangement of parts that the device is practically without holding power to resist a downward pull. Were it not for the upward pull of the spring shade-roller the device would of its own weight descend to the bottom of the window-casing. This may be

readily understood from Figs. 1, 2, and 4 of the drawings. It is evident that when the device is moving downwardly along the window-casing the shoe 16, by reason of its flexible connection with the head 13, is permitted to lag behind the head 13. The said head 13 is prevented from moving outwardly by the sleeve 23 abutting the sleeve 21. The spring 18 tending to throw the shoe 16 outwardly and downwardly holds the shoe 16 in contact with the window-casing; but as this spring 18 has but little power the shoe 16 is not held against the window-casing with sufficient force to give it perceptible frictional holding power. As soon, however, as a force tending to move the shoes upwardly along the grooves—as, for instance, the upward pull of the spring shade-roller 26—is applied to the device the shoes 16 and short bars or rods 14 and 14^a instantly set themselves in the positions shown in Figs. 1 and 4, the heads 13 are forced inwardly, the springs 12 are compressed, and the device holds the shade against the pull of the spring roller 26. This absence of frictional holding power to resist a downward pull enables the device to descend level, whether grasped at one end or at a point midway between the ends of the stick.

The action of the device in righting itself after being left in an angular position may be understood from Fig. 3. If we let the straight line xx' represent conventionally the left-hand edge of the shade, the other edge may be represented by the irregular line yy' . In this figure the device is represented as having been drawn down at the left-hand side of the window-casing and pushed up at the right-hand side. As is well understood, the upward pull of the spring shade-roller at the top of the shade is exerted wholly upon the lower, or in this case left-hand, end of the device, tending to draw said end up until the device stands level. Now if the shoes 16 were rigidly secured to the heads 13 the outwardly-thrusting springs 12 would be greatly compressed when the shade-holding device stood in the position here shown, and the upper end of the left-hand shoe and the lower end of the right-hand shoe, the points at which the device bears upon the window-casing, would be pressed against the window-casing with so much force that the spring shade-roller could not right the device; but

with the arrangement of heads 13, short rods 14 and 14^a, and shoes 16 here shown the shoe 16 at the right-hand end of the device moves inwardly or toward the head 13 and upwardly with relation to said head, and the right-hand end of the device falls by gravity, while the opposite end of the device is drawn upwardly by the spring shade-roller. By means of this arrangement of parts the device is effectually prevented from becoming wedged in the window-casing.

While this device may be made to work satisfactorily without the use of means for limiting the outward thrust of the springs 12 upon the heads 13, the employment of such means greatly improves the action of the device and is an important part of the invention.

I claim—

1. In a shade-holding device, in combination with a stick, heads at the ends of the stick, shoes carried by the heads, the shoes having up-and-down movement relatively to the heads, means for maintaining the shoes perpendicular to the stick at all times, and spring means for moving the shoes downwardly, substantially as and for the purpose described.

2. In a shade-holding device, the combination of a stick, a head at the end of the stick, an elongated shoe carried by the head having movement toward and away from the head and up and down relatively to the head, and spring means interposed between the head and the shoe tending to move the shoe downwardly and away from the head, substantially as described.

3. In a shade-holding device, the combination of a stick, a shoe at the end of the stick, said shoe being perpendicular to the stick at all times, and having movement toward and away from the stick and up-and-down movement relatively to the stick, means for limiting the movement of the shoe downwardly, and means tending to move said shoe downwardly, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES L. HOPKINS.

Witnesses:

W. E. HOPKINS,
B. P. HOPKINS.