

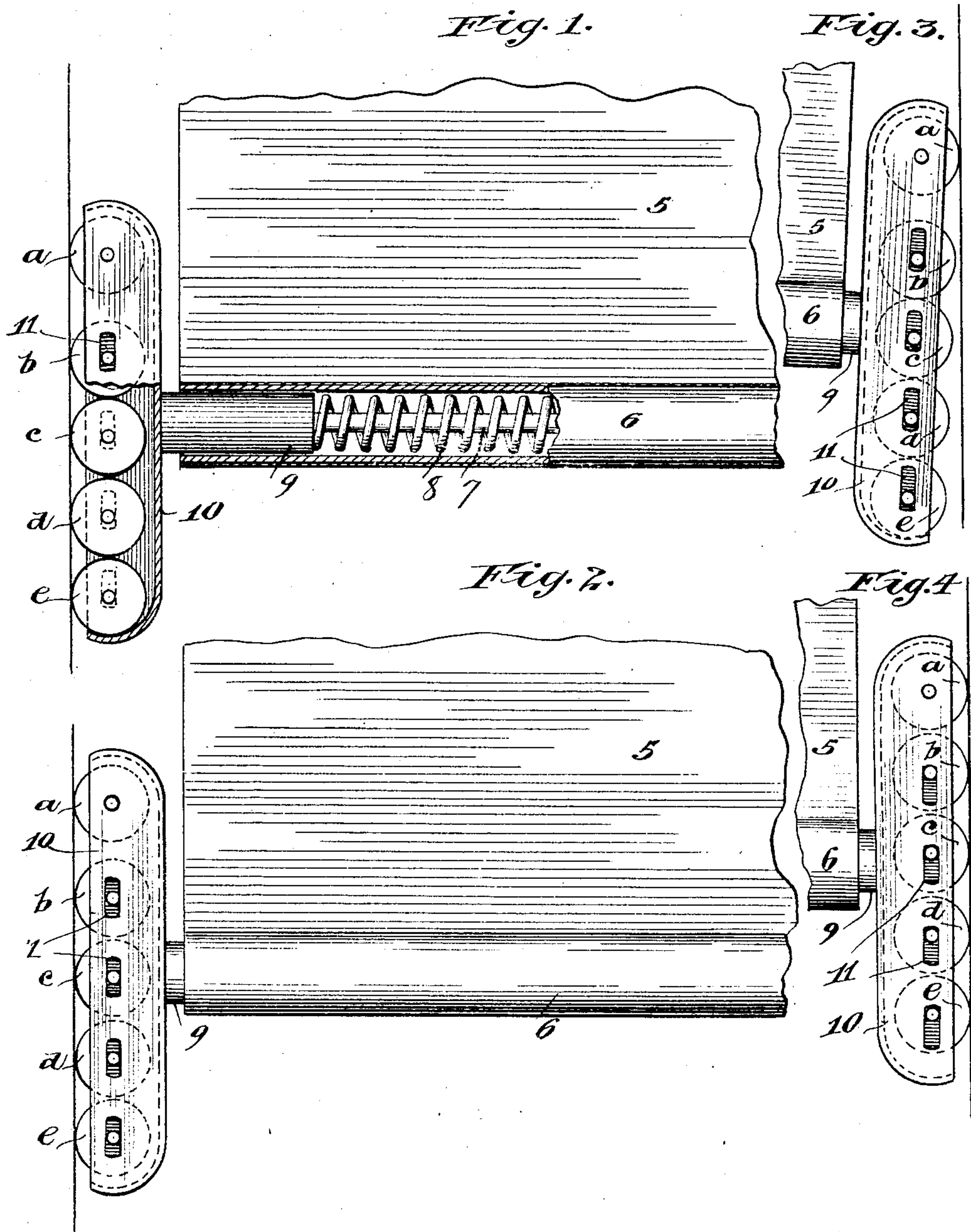
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H. H. FORSYTH.
CURTAIN FIXTURE.

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NO MODEL.



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UNITED STATES PATENT OFFICE.

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CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 777,724, dated December 20, 1904.

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To all whom it may concern:

Be it known that I, HENRY H. FORSYTH, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Curtain-Fixtures, of which the following is a specification.

This invention relates to that class of curtain-fixtures wherein a curtain-stick carried by the lower end of the curtain or shade is provided with friction devices adapted to travel within grooves in the window-frame, so as to guide the shade or curtain smoothly as it is moved up by the tension of the shade-roller or drawn down by hand and fixedly held in adjusted position against the tension of the shade-roller. In curtain-fixtures of this class it is desirable that the fixture shall be as nearly as possible self-righting—that is, that the construction shall be such that the pull of the shade-roller spring will return the lower margin of the shade carrying the curtain-stick to a horizontal position when it has been displaced or moved into an angular position by careless manipulation. It is further desirable in fixtures of this class that the curtain shall be secured against upward movement due to the tension of the shade-roller and with such excess of friction as will require the application of additional force to move it upwardly, while it should be so arranged as to be easily drawn down. Curtains of this class are usually provided with pinch-handles for retracting the friction devices from contact with the window-frame; but even when so provided the curtains are frequently operated either in raising or lowering by grasping them at various points along the lower margin of the shade and forcibly moving them up or drawing them down. The result of this improper manipulation in either direction, but particularly in lowering the shade, frequently results in canting the shade to an oblique position, and therefore it is desirable that the fixture should be made self-righting.

My improvements hereinafter described secured desirable results in a curtain-fixture above indicated in a simple, convenient, and inexpensive manner, and the leading feature of the

invention consists in the employment of a series of peripherally - contacting rollers arranged in a head carried by the shade-stick, which rollers are also adapted to be thrust into contact with the bottom of the groove of the window - frame by an outwardly - forcing spring.

In the accompanying drawings, Figure 1 represents a fragmentary portion of the window-shade provided with a curtain-stick, head, and series of friction-rollers, the stick and head being partly broken away to show the interior mechanism. Fig. 2 is a side elevation of the same parts, showing the friction-rollers in a slightly-different position. Fig. 3 is a view of the head in a slightly-oblique position which it may assume and in which the friction is so reduced as to enable the curtain to right itself. Fig. 4 is a view of the head in a perpendicular position and with the rollers in the released position, which they would assume at the conclusion of the downward movement of the curtain.

In the drawings, let 5 represent the curtain or shade, and 6 the usual curtain-stick; 7, the rod sliding within the stick; 8, the spring for thrusting the rod outwardly, said spring having a bearing at one end on the tubular shank 9 of the head 10, while its opposite end will have a bearing within the tube. This rod, of which there will be one in each end of the fixture, may be provided with a pinch-handle for retracting the head against the thrust of of the spring. The head itself is of the usual type, being in the form of a hollow open-sided box with its inner corners rounded and having journaled or otherwise rotatably mounted therein friction-wheels *a*, *b*, *c*, *d*, and *e*. The wheel or roller *a* is fixedly journaled in the upper end of the head, while the series of rollers *b c d e* are journaled in slots 11 in the head 10, whereby they are permitted bodily movement as well as a rotative movement. The lower roller *e* of the series is adapted in one position to make contact with the wall of the head 10, and the series of rollers *b* to *e* are adapted at all times for peripheral contact with each other and also for edge contact with

the bottom of the groove of the window-frame, which is indicated at 12.

The action of the fixture will be understood by reference first to Fig. 1, wherein the lower margin of the shade is at right angles to the bottom of the groove 12 and the wheels are in contact with the bottom of the groove and with each other, the wheel *a* being also in contact with the bottom of the groove, but out of contact with the other wheels. In this position the friction produced by the contact above mentioned will restrain the shade from being rolled up by the pull of the spring. Now if it be desired to raise the curtain it may be forced up without retracting the series of friction-wheels from contact with the frame of the window, or, if the devices are provided with pinch-handles, the heads may be thus retracted for adjusting. If it be desired to lower the curtain, this may be done by pulling it down either by grasping the lower edge of the shade or by retracting the head. As the curtain is drawn down the series of rollers *b* to *e* have an upward bodily movement in addition to their rolling movement, tending to separate slightly from each other and rolling upon the surface of the window-frame. The downward movement of the shade or curtain is thus rendered easy. Now if in manipulating the curtain it is canted or thrown into an inclined position, as shown in Fig. 3, the series of rollers *b* to *e* will be somewhat released or partially withdrawn from contact with the bottom of the groove, so as to lose their frictional hold, and the roller *a* will become an antifriction device, which will assist under the pull of the shade-roller spring to draw the bottom of the curtain back into horizontal position, or, in other words, the fixture will be automatically self-righting.

While I have shown and described herein a series of rollers and have shown said rollers with journals traveling in slots, it will be understood that my invention in its broader aspect is not limited to such detail of construction. So far as I am aware I am the first to provide a curtain-fixture having a head containing a series of wheels, rollers, or similar elements in peripheral contact with each other and also adapted for edge contact with the window-frame. I further believe that I am the first to provide such a series of rollers having a described relation to each other and to the window-frame in combination with a terminal roller or rollers or equivalent curved surface affording an antifriction element to assist in the self-righting of the fixture and, further, that I am the first to provide a fixture of the class described having a series of wheels or rollers or like elements making periph-

eral contact with each other and also contact with the wall of the head or body in which the said elements are mounted. Obviously this series of wheels or rollers might make contact with some other part of the head as well as with its lower end.

I claim—

1. In a curtain-fixture the combination with a curtain-stick of a head carried thereby and provided with a series of bodily-movable roller elements adapted for peripheral engagement with each other and with the window-frame, one of said roller elements being also adapted to engage the head whereby the free rotation of the roller is impeded on the upward movement of the curtain and the series of roller elements being adapted for unimpeded rotation on the downward movement of the curtain.

2. In a curtain-fixture, the combination with a curtain-stick of a friction-head carried thereby, said head having a vertically-movable series of roller elements mounted therein and adapted for peripheral contact with each other and with the window-frame, said head having a curved contact-surface at its end with which one of said roller elements engages, substantially as and for the purposes described.

3. In a curtain-fixture, the combination with a curtain-stick of a friction-head carried thereby, said head having a series of roller elements journaled therein and bodily movable whereby they are adapted for peripheral engagement with each other and with the window-frame, one of said rollers being adapted to move into contact with the head, said head having a terminal roller rotatable upon a fixed axis and adapted to contact the window-frame but out of contact with the series of rollers, substantially as described.

4. In a curtain-fixture, the combination with a curtain-stick of a head carried thereby and provided with a series of bodily-movable roller elements adapted for peripheral engagement with each other and with the window-frame, one of said roller elements being adapted also to engage the head, substantially as described.

5. In a curtain-fixture, the combination with a curtain-stick of a head carried thereby and provided with a series of roller elements having bodily movement therein and adapted for peripheral engagement with each other, with the window-frame, and with the relatively fixed portion of the head, and a terminal roller having rotative movement upon a fixed axis and adapted to contact with the window-frame, substantially as described.

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