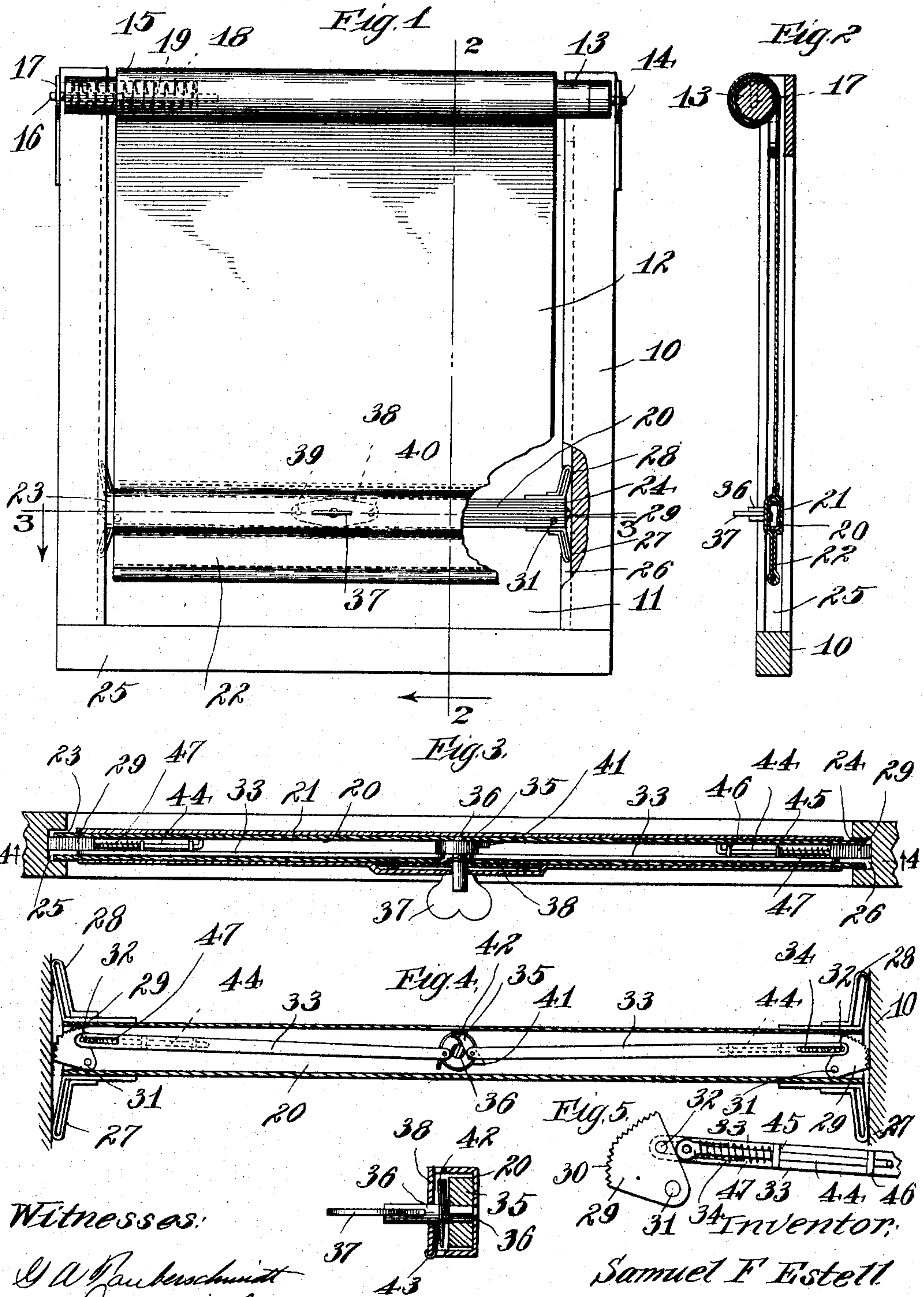


No. 864,411.

PATENTED AUG. 27, 1907.

S. F. ESTELL.  
CURTAIN FIXTURE.  
APPLICATION FILED MAR. 25, 1907.



Witnesses:

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Fig. 6.

By Louis G. Gerson  
Atty



# UNITED STATES PATENT OFFICE.

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## CURTAIN-FIXTURE.

No. 864,411.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed March 25, 1907. Serial No. 364,453.

*To all whom it may concern:*

Be it known that I, SAMUEL F. ESTELL, a citizen of the United States, and resident of Los Angeles, county of Los Angeles, and State of California, have invented certain new and useful Improvements in Curtain-Fixtures, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to spring-retracted window shades or curtains, particularly those employed at the windows of railway coaches and adapted to be secured in any adjusted position by a fixture comprising shoes which are carried by the shade stick provided at the lower margin of the curtain and which normally engage the stile face of the window frame.

As heretofore constructed curtains of this kind have been designed to be raised by manually releasing the shoes from engagement with the window frame by means of a suitable catch or thumb-piece provided for that purpose, and by then permitting the curtain to be drawn or rolled up by the retracting spring or spring-actuated roller at its top. Similarly, curtains as heretofore constructed should be lowered by first releasing the shoes by means of the catch just referred to and by then drawing the curtain down to the desired position. It has been customary, however, to provide shoes for securing the curtain in any desired position, which have merely a frictional engagement with the stile face of the window frame and the curtain can be raised, therefore, by forcibly pushing upwardly on the shade stick and can be lowered by forcibly drawing downwardly on the shade stick or on the marginal hem or fringe of the curtain. When the curtain is operated in this way the shade stick is likely to become broken in use or so distorted as to render inoperative the fixture which it supports, and the curtain itself becomes torn or wrinkled.

The object of the invention is to provide means for preventing curtains from being worn or destroyed by use in the manner described, and the invention contemplates a fixture for securing a curtain in any adjusted position which will offer but little resistance to the lowering of the curtain and which will effectually prevent the curtain from being raised until the fixture has been first released by the hand.

Further objects of the invention will be developed during the course of the following specification.

In the accompanying drawings—Figure 1 is a front elevation of a window frame and shows a curtain having a fixture applied thereto which embodies the invention; Figs. 2 and 3 are sectional views taken on the lines 2—2 and 3—3, respectively, of Fig. 1; Fig. 4 is a longitudinal section of the fixture as viewed from the line 4—4 of Fig. 3; Fig. 5 shows some of the parts seen in Fig. 4 viewed from the opposite direction; and Fig. 6 is a central vertical section of the fixture.

Details of a window frame are shown in the drawings at 10, and a flexible shade or curtain for covering the window opening 11 within the frame 10 is designated 12. As is customary in devices of this kind the upper margin of the curtain 12 is secured to a roller 13, having at one end a gudgeon 14, which is journaled in the window frame, the opposite end 15 of the roller being rotatably mounted on a spindle 16, which is fixed against rotation in the window frame at 17. A spring 18 is coiled about the spindle 16 within a socket 19 formed in the end 15 of the roller 13, and reacts between the spindle and the roller to turn the roller and raise the curtain 12.

A shade stick 20 is provided, and as shown is secured within the marginal hem 21 of the curtain, a flexible portion 22 of the hem extending below the stick to provide a convenient grip in lowering the curtain. The ends 23, 24, of the shade stick 20 run in grooves 25, 26, formed in the stile faces of the window frame 10, and preferably each end of the stick is vertically increased in width by wings 27, 28, which, as shown, are of strap metal bent to loop form and project beyond the ends of the stick, where they have a sliding engagement with the bottom of the groove 25, 26, to maintain the shade stick in a horizontal position.

Mechanism for securing the curtain in any adjusted position is carried by the shade stick 20, and as shown the shade stick is made tubular and of rectangular cross-section to provide a housing for the parts of the mechanism. This mechanism comprises a shoe 29, having a curved face 30, which is preferably toothed, as most clearly shown in Fig. 5, eccentrically pivoted to the walls of the shade stick 20 at 31 adjacent each end. Each of the shoes is adapted to play in and out of one end of the stick to engage the bottom of the grooves 25, 26, formed in the stile faces of the window frame. As shown each of the shoes carries a wrist-pin 32, and a link 33 having a slot 34 adjacent one of its ends for receiving the wrist pin 32 leads through the interior of the shade stick from each of the shoes 29 to a crank disk 35, fixed on the stem 36 of a turn button 37, which projects from the face of the shade stick about midway of its ends and is journaled in the walls of the stick.

To facilitate the assembling of the parts a section of the front wall of the shade stick about the turn button 37 preferably takes the form of a plate 38, which is removably secured in position by screws 39, 40. Rotation of the crank disk 35 is limited by a stop 41 adapted to engage the inner wall of the shade stick, and in order that the links 33 may be normally advanced, a spring 42 is coiled about the stem 36, of the turn button 37 and reacts upon the wall of the shade stick at 43, Fig. 6. Each of the shoes 29 is yieldingly advanced upon the stile face of the window frame 10 by a plunger 44, most clearly shown in Fig. 5, which bears upon the shoe and has a sliding engagement with lugs 45, 46, carried by the



link 33. An extensible spring 47 reacts between one of the lugs, as 45, and the head of the plunger 44.

By means of the invention the window curtain may be easily lowered without injury if it be simply grasped adjacent its lower margin, as at the flexible portion of the hem 22, below the shade stick 20, and drawn downwardly, the shoes 29 being turned on their pivots 31 by the downward movement of the curtain to compress the springs 47 and thus offering but little resistance to the movement. The eccentric form of shoes 29, by reason of the rolling engagement which the toothed face of each of these shoes has with the stile face of the window frame, effectually resists any attempt to raise the curtain without releasing the shoes. Whenever, therefore, the curtain is to be raised, the turn button 37 must be grasped by the hand and rotated to retract the links 33 and the shoes 29. The springs 42 and 47 insure the immediate re-engagement of the shoes 29 with the stile face of the window frame as soon as the turn button 37 is released.

I claim as my invention—

1. In a curtain fixture, in combination, a shade stick, a shoe shiftably mounted at the end of the stick, a pin carried by the shoe, a link having a slot for receiving the pin, and a spring reacting between the shoe and the link.
2. In a curtain fixture, in combination, a shade stick, a shoe shiftably mounted at the end of the stick, a pin carried by the shoe, a link having a slot for receiving the pin, a spring reacting between the shoe and the link, means for retracting the link, and a spring for advancing the link.
3. In a curtain fixture, in combination, a shade stick, a shoe shiftably mounted at the end of the stick, a pin carried by the shoe, a link having a slot for receiving the pin, a spring reacting between the shoe and the link, a turn button journaled on the stick, crank connection between the link and the button, a stop limiting the rotation of

the button, and a spring reacting on the button to advance the link.

4. In a curtain fixture, in combination, a shade stick, a shoe having a curved face eccentrically pivoted adjacent one end of the stick, a wrist pin carried by the shoe, a link having a slot for receiving the pin, means for retracting the link, a spring for advancing the link, and a spring for independently advancing the shoe.

5. In a curtain fixture, in combination, a shade stick, a shoe having a curved face eccentrically pivoted adjacent one end of the stick, a wrist pin carried by the shoe, a link having a slot for receiving the pin, means for retracting the link, a spring for advancing the link, and a spring reacting between the shoe and the link.

6. In a curtain fixture, in combination, a shade stick, a shoe having a curved face and being eccentrically pivoted to the stick adjacent one of its ends, and means for turning the shoe on its pivot including a reciprocable member having a connection with the shoe adapted to yield to movement of such members in one direction.

7. In a curtain fixture, in combination, a tubular shade stick, a curved-faced eccentrically-pivoted shoe playing in and out of one end of the stick, a shiftable link leading into the stick, connection between the link and the shoe adapted to yield to movement of the link in one direction, and operating means projecting from the face of the stick for shifting the link.

8. In a curtain fixture, in combination, a shade stick, an oscillatable shoe mounted at the end of the stick, a longitudinally-movable link, and connection between the link and the shoe adapted to yield to relative movement between the link and the shoe in one direction.

9. In a curtain fixture, in combination, a shoe adapted to engage the stile face of a window frame, a grip for manually retracting the shoe, and connection between the shoe and the grip adapted to yield to movement of the shoe in one direction.

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Witnesses:

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