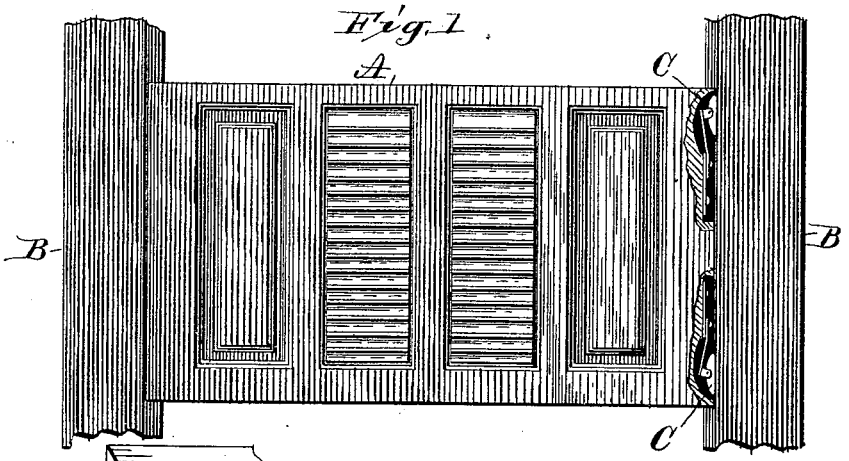
(No Model.)

H. E. WILLER.

HOLDING SPRING FOR SASHES AND SCREENS.

No. 346,524. Patented Aug. 3, 1886.

Fig. 1.



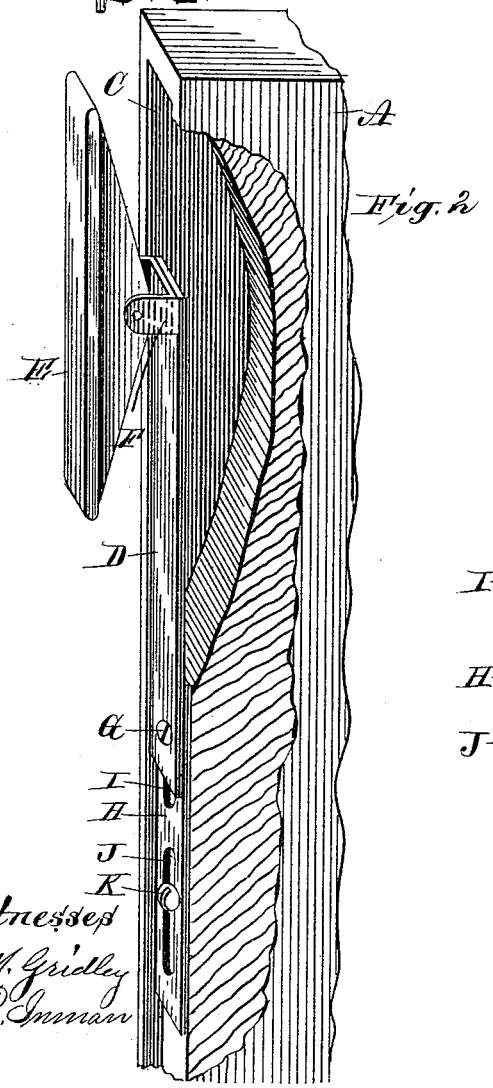
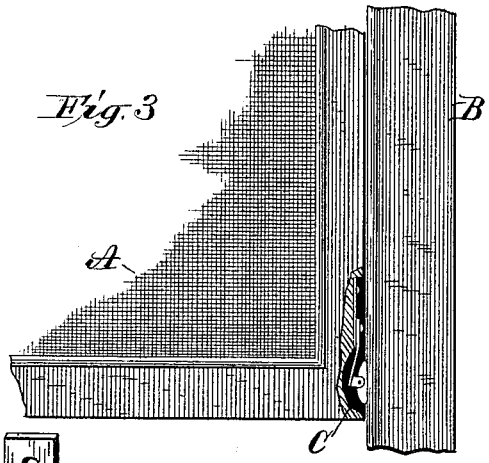


Fig. 2.

Fig. 3.



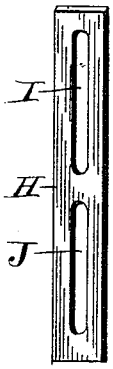


Fig. 4.

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HENRY E. WILLER, OF MILWAUKEE, WISCONSIN.

HOLDING-SPRING FOR SASHES AND SCREENS.

SPECIFICATION forming part of Letters Patent No. 346,524, dated August 3, 1886.

Application filed March 20, 1886. Serial No. 195,886. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WILLER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Springs for Balancing Sliding Blinds and Screens; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a device whereby window blinds or screens may be balanced and supported at any point of their travel, while also moving freely up or down under slight force; and I also provide for adjusting the tension or power of the supporting device, whereby light or heavy blinds or screens are sustained and operated equally well with the device, and whereby shrinkage and expansion of the blinds or screens, or of the window-frame, is provided for.

In the accompanying drawings, Figure 1 represents a portion of an inside window-blind supported at each side in a window-frame, (of which only a small portion is shown,) parts of the blind being broken away, showing my device attached thereto. Fig. 2 represents a portion of a window-blind with my improved device attached thereto, a part of the blind being broken away, showing my device and the manner of attaching it to the blind. Fig. 3 is a window-screen with my device attached thereto. Fig. 4 is the adjusting-slide.

The same letters refer to like parts in all the views.

The blind A slides up and down in ways on the window-frame B B, and is balanced and supported by two or more springs with friction-bearings attached to the edge of the blind. In one or both edges of the blind one or more sockets, C C, are provided for the spring and friction-block, one end of which socket is shallow and has a flat bottom for the attachment of the spring, and the other end is deeper, providing needed room for the yielding spring and its friction-block. A spring, D, made of flat steel ribbon, has pivoted to one end a friction-block, E, which friction-block has a long face or bearing-surface adapted to press against the frame B and support the blind by friction.

For convenience in attaching the friction-block E to the spring D, I provide two lugs, F F, rigid to and standing out at right angles from the side of the spring at its free end, through which and through the interposed block a pivot-pin is put. A considerable amount of bearing-surface is required on the friction-block if the blinds are heavy, or if only two springs are used. The other end of the spring D is made fast to the blind on the bottom of the shallow part of the socket by means of a bolt or screw, G, passing through the spring and turning into the blind, the spring being so located that the friction-block will be in front of the deep part of the socket C, and will, in its position as attached to the blind, project beyond the edge of the blind, as shown in Fig. 2, so as to bear against the ways when the blind is in position in the frame.

For the purpose of regulating the power of the spring and the force with which the friction-block E will be pressed against the window-frame, I provide a plate, H, having a longitudinal slot, I, which I insert under that end of the spring D which is affixed to the blind, passing the screw G through the slot I, to guide and retain the plate H in position. When it is desired to have the spring D exert a light pressure on the friction-block, the plate H is drawn as far as possible from beneath the spring; but when a greater pressure is desired, or, in other words, when a stiff spring is required, the plate H is pushed farther under the spring D, even to the full length of the slot I, if required, whereby the spring will be made very stiff and powerful. For greater certainty and reliability in use a second slot, J, may be made in plate H, and a second screw, K, may be inserted through it to guide and steady the plate.

The friction-block E, I construct preferably of wood, as a rubber bearing is found to be too adhesive to the opposing frame, and a metal block with a smooth face does not have sufficient friction for the purpose, and a rough-faced metal block abrades and wears the face of the frame, to its injury or entire destruction.

Two, or preferably four, of the springs may

be used with each blind, being placed opposite each other in the edge of the blind.

It will be seen that my device may be applied in a similar manner to window-screens, as shown in Fig. 3.

What I claim as new, and desire to secure by Letters Patent, is—

1. A spring, D, affixed at one end to the edge of a window blind or screen, the other end of the spring being free and adapted to bear against the window-frame, and an adjustable slotted plate, H, inserted beneath the spring D, in combination with the blind or screen to which the spring is attached, and the window-frame, substantially as described.

2. In a device for supporting window blinds or screens, in which a flat or ribbon spring is affixed at one end to the edge of the blind or screen, an adjustable slotted plate, H, inserted beneath the spring, and adapted by adjustment to increase or diminish the power of the spring, substantially as described.

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

HENRY E. WILLER.

Witnesses:
C. T. BENEDICT,
E. R. INMAN.