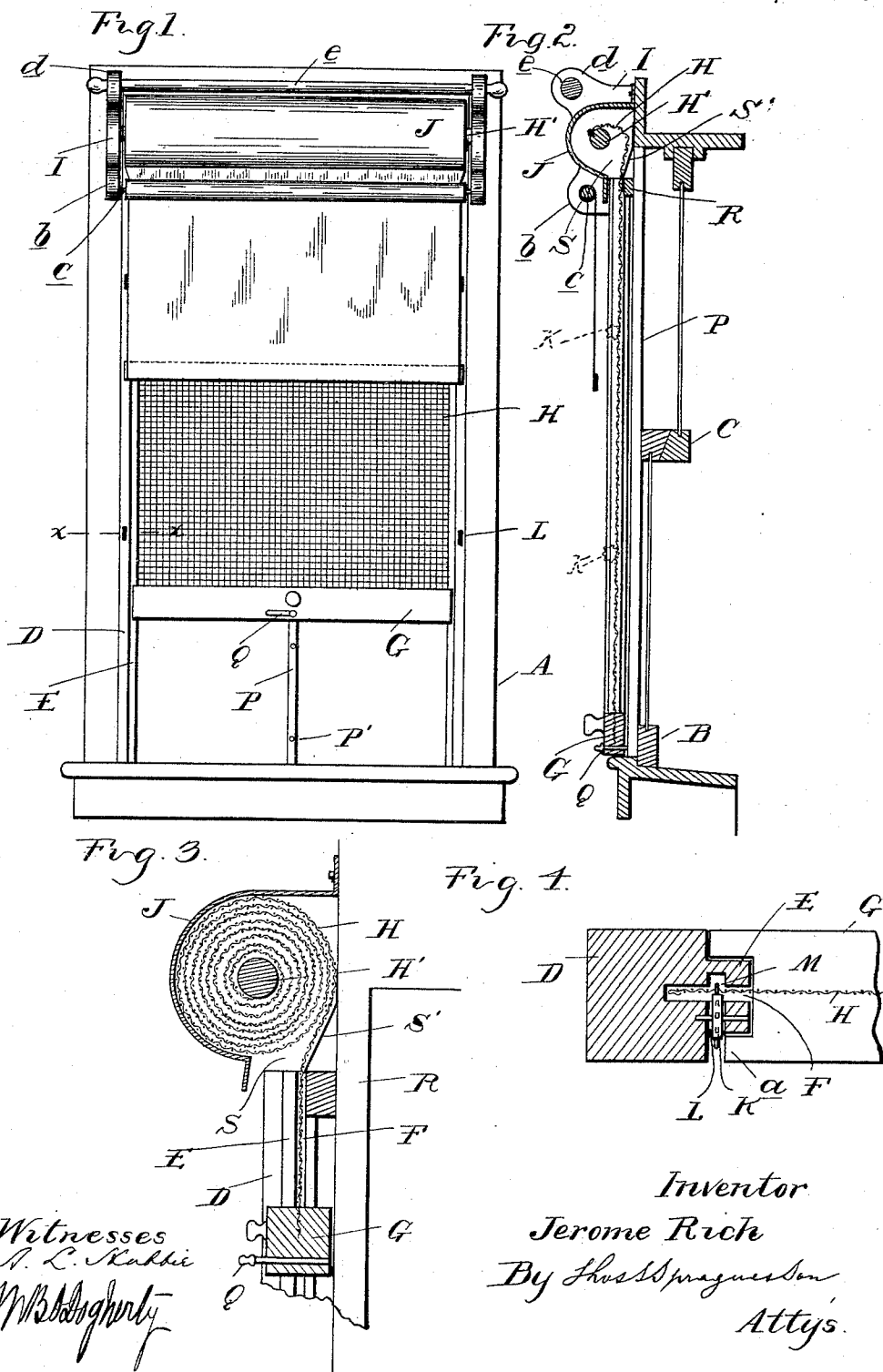


(No Model.)

J. RICH.
WINDOW SCREEN.

No. 484,978.

Patented Oct. 25, 1892.



UNITED STATES PATENT OFFICE.

JEROME RICH, OF JACKSON, MICHIGAN.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 484,978, dated October 25, 1892.

Application filed April 20, 1892. Serial No. 429,963. (No model.)

To all whom it may concern:

Be it known that I, JEROME RICH, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in window-screens; and the invention belongs to that class of screens which are wound about a roller and adapted to be raised and lowered across the window-space.

The invention consists in the peculiar construction of the supporting-frame, the manner of guiding the edges of the screen in the way in said frame and of holding it from lateral displacement and sagging, the peculiar construction of the roller, and the means for rolling the screen about the roller, and, further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is an elevation of the window, showing my improved screen attached. Fig. 2 is a vertical central longitudinal section thereof. Fig. 3 is a similar section through the roller and the upper part of the frame, showing the screen wound around the roller. Fig. 4 is an enlarged section on line *x x* in Fig. 1.

A is the window-frame, B the lower window-sash, and C the upper sash of a window of ordinary construction.

Just inside the window-frame I secure upon the opposite sides the strips D, having the tenon E extending the entire length upon the inner edges thereof. This tenon is provided centrally with a slot or guideway F. G is a cross-bar, mortised at the ends, as shown in Fig. 4, adapted to engage with said tenons and to freely slide up and down thereon. To this cross-bar is secured a screen H, of wire-cloth or any other suitable material, the edges of this screen engaging in the guideways F, and is at its upper end secured to the roller H', journaled in brackets I, secured at each side of the window.

J is a cap or cover for the roller and preferably semicircular and secured near its upper edge, being formed of spring metal for

the purpose more fully hereinafter described.

K are rollers journaled in recesses L, formed in the tenon E, as shown in Fig. 4. These rollers are provided with pins M, which project into or across the guideway F, so that when the wire-cloth is engaged therein these pins will project through the cloth and hold the same from lateral displacement or sagging. To allow the rollers to freely turn without interfering with the movement of the cross-bar, I cut off the lug *a* of the cross-bar, as shown in Fig. 4.

P is a longitudinal strip extending from the bottom of the window to the top thereof and against which the rear face of the cross-bar, G engages. This strip is provided with suitable notches or apertures P', into which a bolt Q is adapted to engage to lock the screen at any desired point.

R is a cross-bar at the top of this device, extending across behind the screen and slightly raised beyond the inner face of the chamber S within the cap J.

S' is a wear-plate secured at the lower end to the cross-bar R and at the upper end to the casing O to prevent the rotation of the screen injuring the window-frame. The cross-bar R is so arranged that as the wire passes from the upper ends of the guideways F it is free to bend inward, as shown in Fig. 3, which will start it on its circular motion when the cross-bar G is raised, so that when I lift this cross-bar the roller will be turned and the wire-cloth coiled thereon. The cap J is made of spring metal and secured near its upper edge, so that it may give a little in the coiling up of the screen. The brackets I are provided at the lower end with an extension *b*, in which a bearing is formed for the curtain-roller *c*, which can be freely raised and lowered in front of the screen to shut out the light at the top. The bracket is also provided with an extension *d* for the curtain-rod *e*, so that the usual curtains may be employed in the window without interfering with the use of the screen. The screen may be raised and the window opened and the screen then closed and locked, and will not only prevent the access of flies, &c., but will also remain taut by the construction and arrangement of the rollers K with the engaging-pins. No

spring is required on the roller H nor employed in connection with the recessed cross-bar R and the elastic cover J.

What I claim as my invention is—

5 1. In a window-screen, the combination, with a supporting-roller and vertically-grooved side guides, of a foraminated screen on the roller and rollers mounted in the guides on opposite sides, having radial pins thereon
10 projecting beyond the path of and through the screen as the latter is moved down, substantially as described.

2. In a window-screen, the combination, with a foraminated screen, of guiding and retaining rollers journaled at the sides of the
15 screen and formed with a series of radial pins

on their peripheries, arranged to engage and project through the edges of the screen, substantially as described.

3. In a window-screen, the combination, 20 with a frame and screen, of vertical side guides for the screen and a series of rollers journaled in the guides on opposite sides, having radial pins on their peripheries, projecting into and across the path of the screen, 25 substantially as described.

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

JEROME RICH.

Witnesses:

M. B. O'DOHERTY,
N. L. LINDOP.