

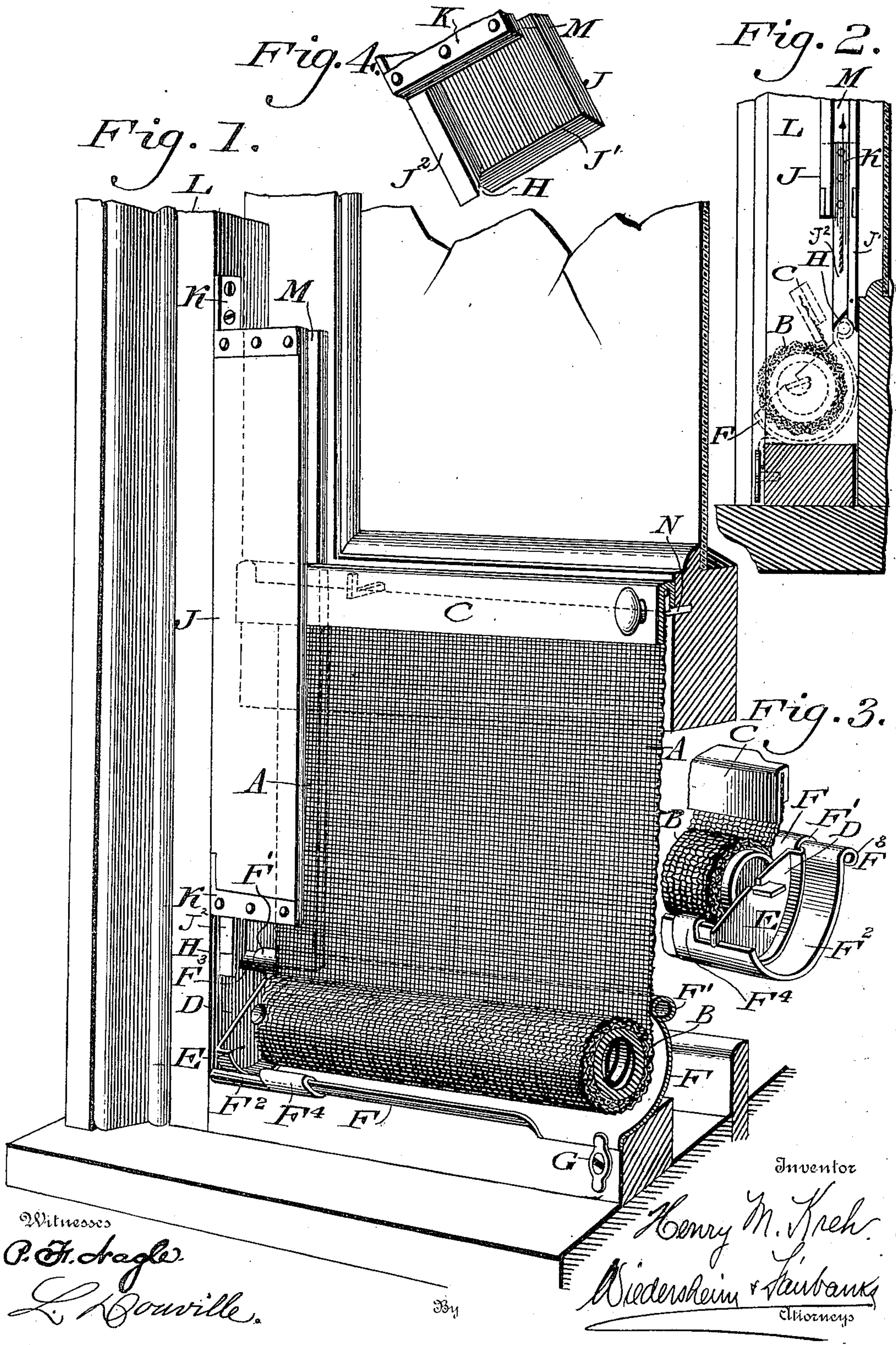
No. 670,239.

Patented Mar. 19, 1901.

H. M. KREH.  
WINDOW SCREEN.

(Application filed Sept. 26, 1900.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

HENRY M. KREH, OF PHILADELPHIA, PENNSYLVANIA.

## WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 670,239, dated March 19, 1901.

Application filed September 26, 1900. Serial No. 31,141. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. KREH, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Window-Screens, of which the following is a specification.

My invention consists of a window or insect screen which is connected with an automatically-winding roller and attachable to a sash, so as to follow the motions of the latter, novel means being provided for mounting the bearing-plate of said roller on the window-frame and guiding the sides of the screen in its ascent and descent, other novel details of construction being presented, as will be hereinafter described, and pointed out in the claims.

Figure 1 represents a perspective view showing approximately one-half of a window-screen embodying my invention, together with a corresponding portion of a window to which the screen is applied. Fig. 2 represents a vertical section of a portion thereof. Fig. 3 represents a perspective view of the right-hand end of the screen and appurtenances attached. Fig. 4 represents a perspective view of the lower portion of one of the vertical guides of the screen.

Similar letters of reference indicate corresponding parts in the figures.

A designates a piece of gauze or netting constituting the screen proper, which is connected at the bottom with the spring-roller B, which latter is well known, for automatically winding or rolling the screen thereon, and at top with the channeled piece or bar C. The gudgeons D of the spring-roller are mounted on the upright end pieces E of the depressed or trough-like plate F, the same being secured to the window-sill by the button or catch G, said plate having its beaded end portions F' abutting upwardly against the walls of the recesses or seats H, the latter being formed in the lower ends of the separated bars or battens J, which by means of the brackets K are secured to the side stiles L of the window-frame, each pair of said battens having a vertical passage M between the members of the same to receive the side portion of the screen and permit the same to move therethrough as the screen is being wound and unwound. One of the battens J is extended below the

lower bracket K as a leg J', and a narrow piece forming the tongue J<sup>2</sup> is continued downwardly from said bracket at a right angle to said leg, and the recess is formed on the bottom of said leg and tongue at or about the place of junction thereof, the same extending upwardly and constituting the seat H for the upper end of the plate or frame F. As usual in the case of spring-rollers, one of the gudgeons is square or flat and the other gudgeon is round, the former being held in a corresponding opening or slot of the bracket or bearing-piece and the latter revolving freely in a round opening in the other bracket or bearing-piece, the square or flat end being left free, so as to be capable of being turned so as to adjust the tension of the spring. The square or flat gudgeon occupies an obliquely-arranged slot in its bearing-piece, while the opposite gudgeon occupies the circular or round opening, as has been stated, so that when the screen is raised the roller will not be disconnected from its bearing-pieces.

The top bar C is hung on the hooks N, secured to the bottom of the window-sash, whereby the screen is connected with said sash and may follow the motions thereof.

The operation is as follows: The bottom of the screen is connected with the roller B and the latter mounted in the plate F, the ends of said plate being placed on the seats H. The top of the screen is connected with the sash by means of the bar C and hooks N, and the sides thereof are inserted in the channels M of the battens J, all as has been stated. When the sash is raised, the screen follows the same, and so is unwound from the roller B, the space between the sash and sill thus being covered by the screen and the entrance of insects into the apartment is prevented. As the sash is lowered the screen is wound on said roller to the extent that the sash is moved, and thus the slack of the screen is always taken up.

The battens J guide the sides of the screen in its ascent and descent and also serve to close the spaces between the screen and window-frame, besides preventing flapping of the screen.

In order to adapt the plate F to windows of greater width, the ends of the same are provided with extensible pieces F<sup>2</sup>, which are



made to conform to the shape of said plate F and have beads F<sup>3</sup>, which telescope with the beads F', and loops F<sup>4</sup>, which hang on the end of the plate opposite the said bead F', by which provision the extensions F<sup>2</sup> are supported on the plate F and may be moved out and in, in order to be adjusted to different widths of window-sills.

When the screen is to be disconnected from the sash, the bar C is lifted clear of the hooks N, and the screen will then wind on the roller B, as shown dotted in Fig. 2. The screen may now be disconnected from the window-sill. In this case the button G is properly turned, thus releasing the plate F from said sill, and said plate is then disengaged from the seats H on the battens J, and the latter may also be removed from the stiles L, if so desired.

The brackets K are also vertically grooved, so as to be in communication with the passages M, whereby the side portions of the screen may also pass through said brackets K, as in their movements through said passages.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a window-screen, a screen proper, a spring-roller therefor, and a bearing-plate for said roller, in combination with a guide for said screen proper, and an abutment for the upper end of said plate, said guide being formed of separated bars and said abutment being formed of members depending from said

bars, and having at the bottom thereof an upwardly-extending recess.

2. In a window-screen, a guide through which the side of the screen may move in its ascent and descent, a bracket adapted to connect said guide to the window-frame, said bracket having a groove which is in communication with the passage-way in said guide and members depending from said guide and having an upwardly-extending recess which latter forms a seat for the upper part of the bearing-plate of the roller of the screen.

3. In a window-screen formed of a screen proper, a spring-roller therefor, and a bearing-plate for said roller, a guide for said screen proper, a leg and tongue depending from said guide, said leg and tongue having at the bottom thereof, an upwardly-extending recess, the same forming a bearing for the upper end of said plate.

4. A window-screen consisting of the screen proper and a spring-roller therefor, a bearing-plate for said roller, a guide for said screen proper and an upward abutment for said plate, said abutment consisting of members depending from said guide and having an upwardly-extending recess in the under side thereof, the upper end of said plate being removably seated in said recess, and means for connecting the lower end of said plate with a window-sill.

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