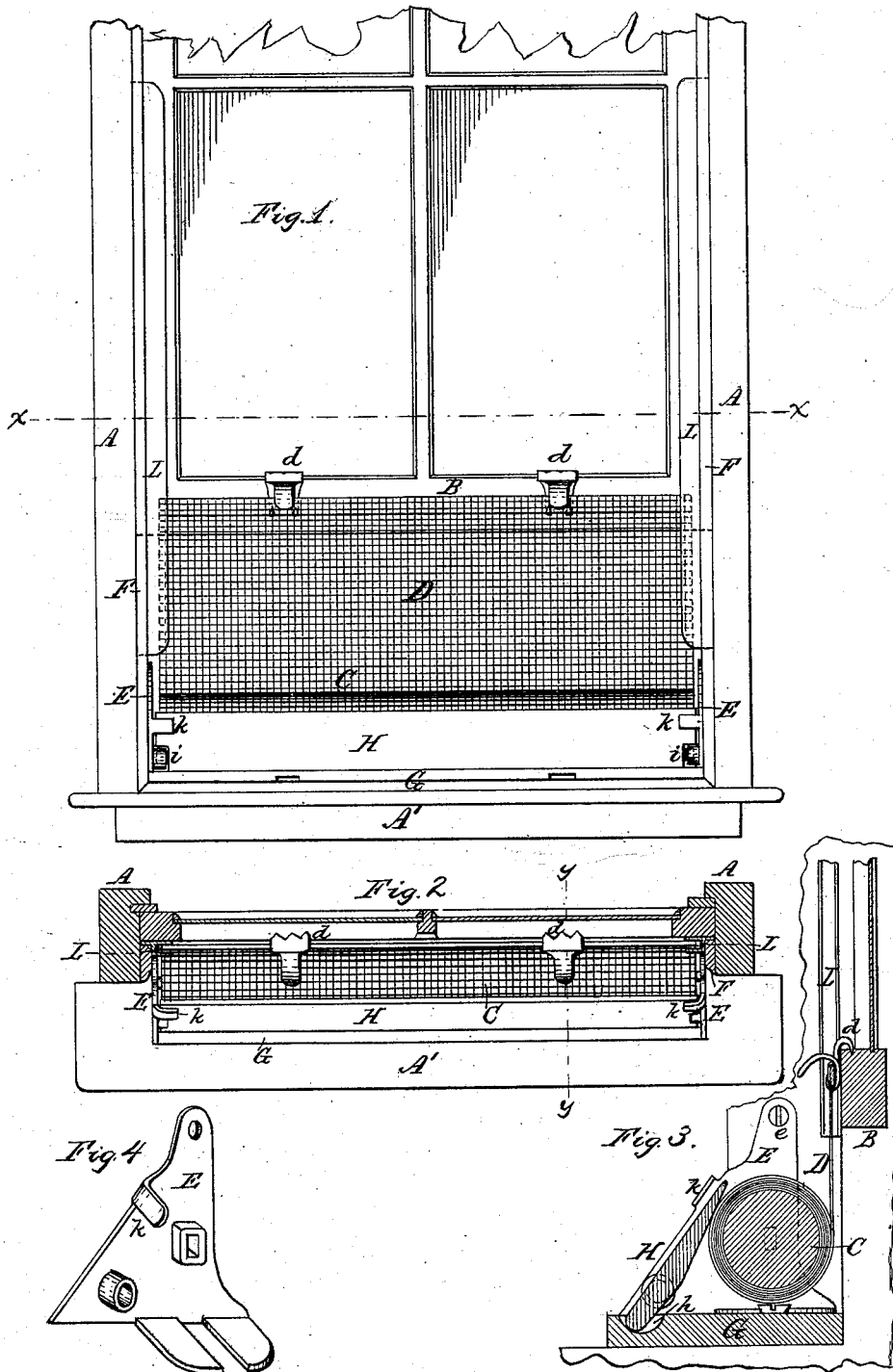


A. ALTENBURG & W. C. HILL.
Window Screen.

No. 201,478.

Patented March 19, 1878.



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UNITED STATES PATENT OFFICE.

AUGUSTUS ALTENBURG AND WALLACE C. HILL, OF BUFFALO, NEW YORK.

IMPROVEMENT IN WINDOW-SCREENS.

Specification forming part of Letters Patent No. **201,478**, dated March 19, 1878; application filed February 23, 1878.

To all whom it may concern:

Be it known that we, AUGUSTUS ALTENBURG and WALLACE C. HILL, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Window-Screens, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to that kind of window-screens in which the screen is wound upon a spring-roller arranged upon the window-sill, and secured with its end to the lower rail of the lower sash, so that in raising and lowering the sash the screen will also be raised and lowered, and always cover the opening formed by raising the sash.

Our invention consists of the peculiar construction of the device, so as to insure a tight fit of the screen to the window-casing, thereby preventing the ingress of insects, dust, &c., as will be hereinafter fully set forth.

In the accompanying drawing, Figure 1 is an elevation of a window provided with our improved screen. Fig. 2 is a horizontal section in line *xx*, Fig. 1. Fig. 3 is a cross-section in line *yy*, Fig. 2. Fig. 4 is a perspective view of one of the roller-brackets.

Like letters designate like parts in each of the figures.

A A represent the side pieces, and A' the sill, of the window-casing. B is the lower rail of the lower sash; C, the spring-roller, and D the screen wound upon the latter, and provided at its end with hooks *d*, by means of which it is attached to the rail B. The spring-roller C is constructed in the usual manner, so as to wind up the screen as the sash is lowered. E E are the roller-brackets, secured to the side strips F of the window-casing by screws *e*, and connected at their lower ends to a strip, G, resting upon the sill A'.

H is a self-adjusting plate or strip arranged in an inclined position on the inner side of the roller C, and resting with its lower rounded edge in a corresponding channel or groove, *h*, formed in the strip H, while its upper edge is held in contact with the roller C by gravity.

The strip H is provided at its ends with journals or studs *i* engaging in sockets formed in the roller-brackets E, so as to permit the strip to adjust itself freely to the roller C as the screen is wound upon the same or unwound therefrom.

The brackets E are provided with lips or ears *k* projecting over the strip H, so as to prevent the latter from falling back away from the roller.

L L are two vertical U-shaped channels or ways arranged at each side of the sash on the outer side of the side strips F, for the purpose of receiving and guiding the edge of the screen and holding the latter from moving back and forth under the influence of air-currents when the sash is open. The ways L extend down to the brackets E, and form with the latter a close fit at the sides of the screen, while the strip H and plate G form a tight joint at the bottom of the screen, whereby the entrance of insects, dust, &c., at the sides and bottom of the screen is entirely prevented, while at the same time the screen is enabled to move freely in raising and lowering the sash.

Our improved screen is readily applied to and removed from the window, as all of the parts of the device with the exception of the side guides L are permanently secured together and held in place on the window-frame by only two screws, *e*.

We claim as our invention—

1. The combination, with the sash-rail B, spring-roller C, and screen D, of the pivoted strip H, held in contact with the roller by gravity, substantially as and for the purpose set forth.

2. The combination, with the sash-rail B, spring-roller C, and screen D, of the brackets E, bottom strip G, and pivoted plate H, arranged and operating as shown and described.

3. The combination, with the sash rail B, spring-roller C, and screen D, of the brackets E, provided with overlapping ears *k*, bottom strip G, provided with groove *h*, and pivoted plate H, resting in said groove, substantially as and for the purpose set forth.

4. The combination, with the sash-rail B, spring-roller C, and screen D, of the brackets E, bottom strip G, pivoted plate H, and U-shaped vertical ways L, substantially as and for the purpose set forth.

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Witnesses:

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