

No. 714,519.

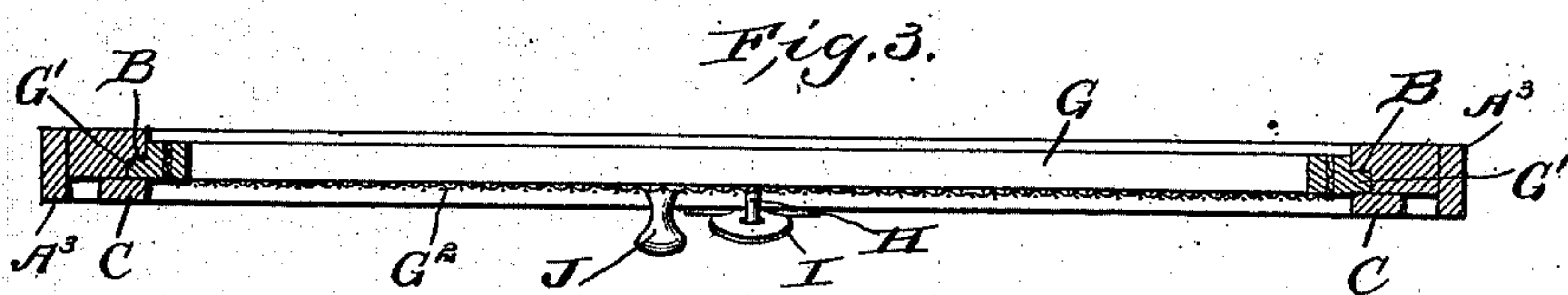
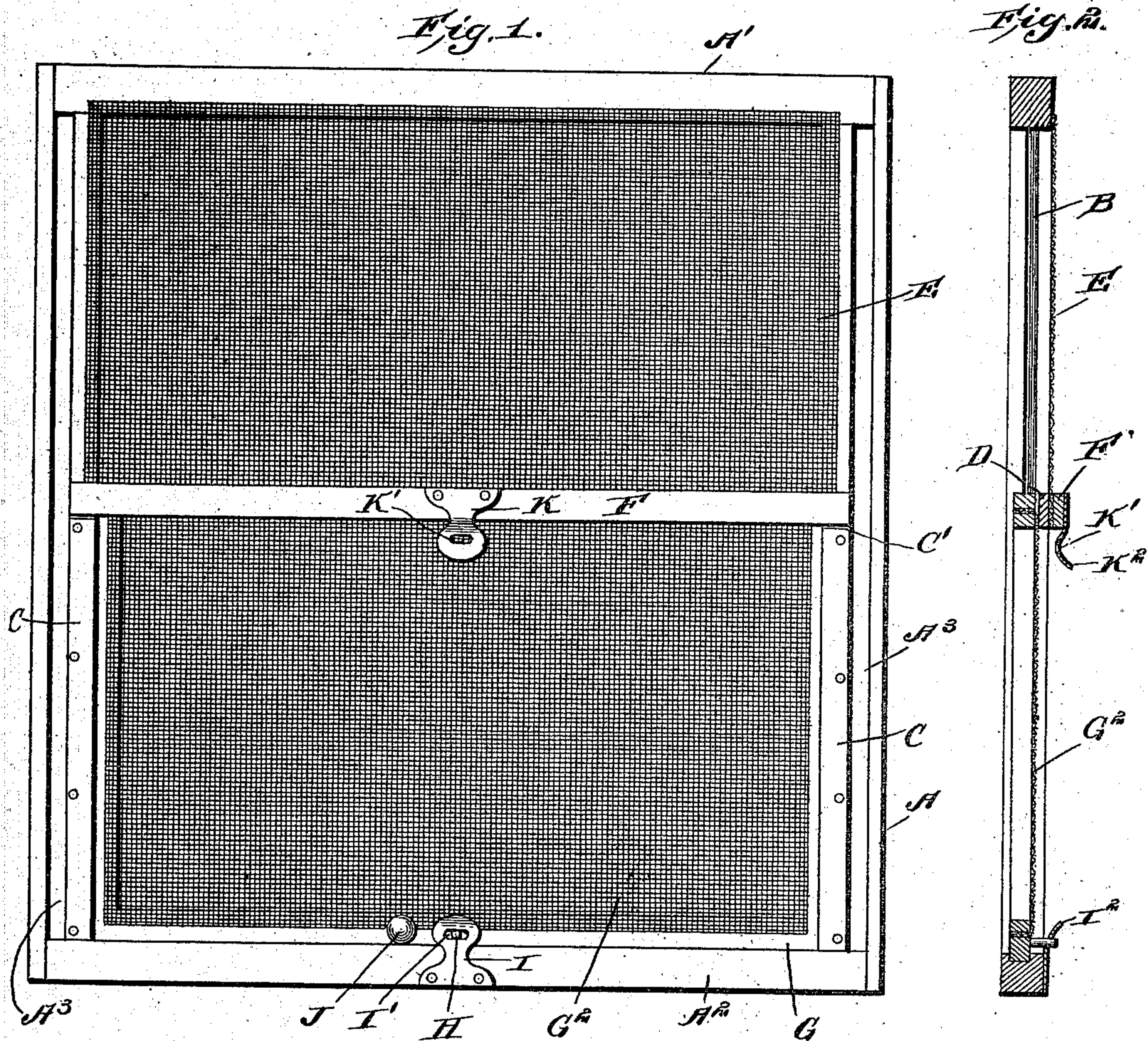
Patented Nov. 25, 1902.

H. L. ROBERTS.
WINDOW SCREEN.

(Application filed July 19, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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Henry L. Roberts

By his Attorney

W. P. Williams

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2 Sheets—Sheet 2.

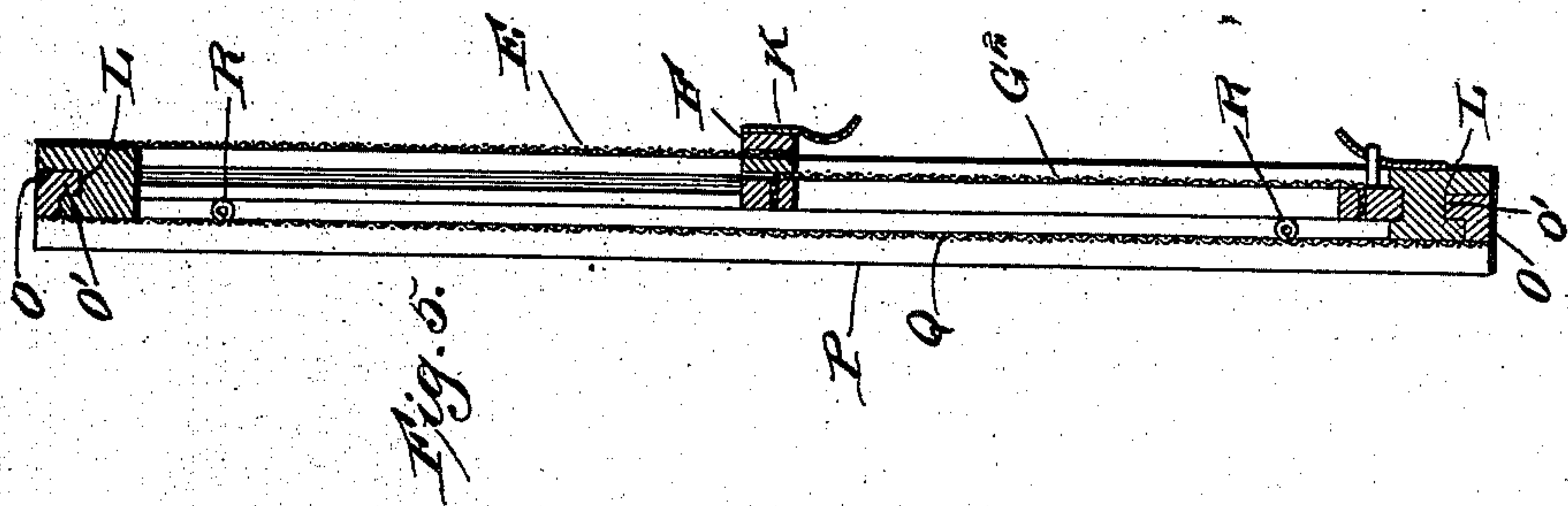


Fig. 5.

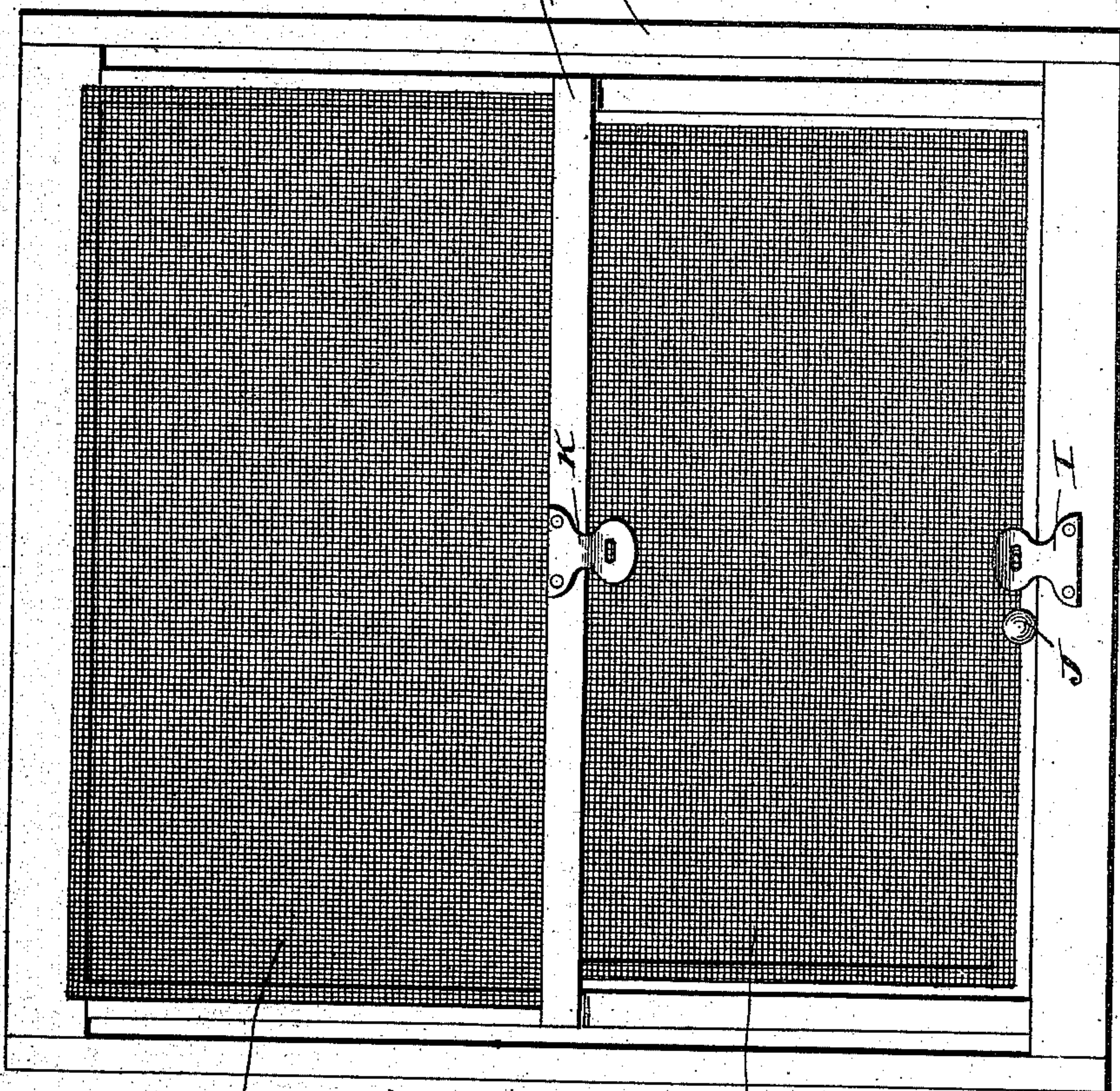


Fig. 4.

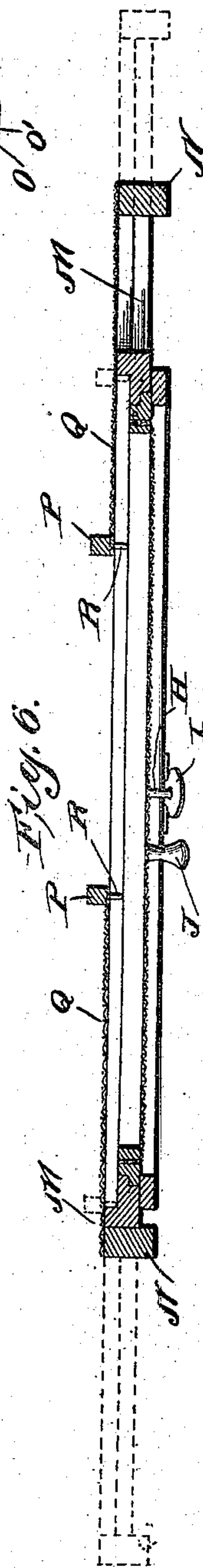


Fig. 6.

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UNITED STATES PATENT OFFICE.

HENRY L. ROBERTS, OF PHILADELPHIA, PENNSYLVANIA.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 714,519, dated November 25, 1902.

Application filed July 19, 1902. Serial No. 116,238. (No model.)

To all whom it may concern:

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

My invention relates to a new and useful improvement in window-screens; and the primary and principal object of my invention is to provide a screen divided in two parts, one part fitting in guideways and adapted to be raised and lowered.

Other objects of the invention will be detailed in the specification.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front view of an ordinary screen made according to my invention; Fig. 2, a vertical section through the same; Fig. 3, a cross-section through the lower portion thereof; Fig. 4, a front elevation of an extension-screen provided with my improvement; Fig. 5, a vertical section of Fig. 4, and Fig. 6 a cross-section through the lower portion of Fig. 4.

In the construction shown in Figs. 1, 2, and 3 the frame A is a solid frame and is not provided with any extension. This frame A consists of the top and bottom rails A' and A², respectively, which are connected at their ends by the side stiles A³. These side stiles are formed upon their inside edge with a rabbet, as indicated at B, and upon the outside of each stile is secured a rabbet-strip C, and this rabbet-strip working in connection with the rabbet B forms a groove extending from the top to the bottom upon the inside edges of the side stiles A³.

D is a center cross-piece extending between the side stiles and connected to the same at each end, thus dividing the screen horizontally. The woven-wire cloth E is secured permanently to the upper portion of the screen

by tacking or otherwise securing the edges of the cloth to the rabbet-strips C upon the sides and to the top cross-rail A' at the top and to the center cross-rail D at the bottom.

F is a center cross-piece secured over the cross-rail D. This cross-strip F is not essentially necessary and could be dispensed with, if desired, but it helps to strengthen the frame and also hides the lower edge of the wire-cloth E.

G is a sliding supplementary frame consisting of top and bottom and side rails joined together, the side rails having formed therein a tongue G', adapted to fit and slide within the grooves in the side stiles A³ of the main frame. This supplementary frame G is provided with woven-wire cloth G² and when the frame is in its normal position entirely closes the lower half of the screen. The wire-cloth upon the supplementary frame G comes in close contact with the rear of the center cross-rail D, so that as the sliding frame G is raised or lowered the cloth G² is always in contact with the rail D, so as to leave no opening by which insects may enter the room.

H is a pin secured to the lower cross-rail of the supplementary frame G and extending outward therefrom.

I is a spring-catch secured to the lower cross-rail A² of the screen-frame, and this catch is provided with an opening I', and as the upper end of the catch is curved outward, as indicated at I², the pin H in descending will strike this curved surface of the catch and spring the same outward until the pin comes in alignment with the opening I', and then the catch will spring back to its normal position over the pin and hold the screen against raising.

J is a knob located in juxtaposition to the pin H and also secured to the lower cross-rail of the supplementary frame G. When it is desired to raise the frame G, the knob is grasped with the hand and with the thumb the spring-catch I is pulled forward far enough to release the pin H, and then the frame G is free to be raised.

K is a spring-catch identical with the catch I, but inverted and secured to the center cross-strip F, and when the spring is raised the pin H in coming in contact with the curved surface K² will force the catch for-

ward until the pin is in alinement with the opening K', when the catch will spring back to its normal position over the pin and hold the frame G raised until released.

5 For the purpose of removing the sliding frame G at any time the rabbet-strip C may be divided in two parts, the division occurring at the point C' just below the center rail D. The lower halves of the rabbet C are re-
10 movably secured to the side stiles A³, so that by removing these lower halves, or possibly only one, the frame G may be removed.

In Figs. 4, 5, and 6 I have shown my improved screen made with expansible sides, so
15 that the screen can be adjusted to different-size windows. The main screen-frame is identically the same as shown and described in Figs. 1, 2, and 3, except that the upper edge of the top rail and the lower edge of the
20 bottom rail are grooved, as indicated at L in Fig. 5. Upon each side of the screen-frame are arranged extension-screens M. These consist of the vertical side pieces N, which lie in the same plane as the main screen-frame.
25 Secured at the top and bottom of these vertical side pieces are slides O, each of which is provided with tongues O', fitting in the grooves L of the top and bottom cross-rails of the screen-frame. These guides are se-
30 cured together at a point between their ends and the side pieces N by means of the small vertical strips P. These strips not only secure together the slides, but are also utilized for securing one edge of the screen-cloth Q
35 of this extension-screen. The top and bottom of the screen-cloth Q are secured to the slides O, and the outer edge of the screen-cloth is secured to the vertical pieces N, and this screen-cloth comes in close contact with
40 the rear of the side stiles A³, so as to allow no opening through which insects may enter the dwelling.

R represents screw-eyes or other projections extending inward from the vertical
45 strips P, which serve as stops to limit the outward movement of the extension-screens M. It will thus be seen that I provide an extension-screen, and by making the extensions of wire-cloth the extensions do not interfere
50 with the ingress of air in the building.

The principal advantage of my invention is that by its construction occupants of the house are enabled to reach out of the win-
55 dows for the purpose of opening or closing shutters and receiving or handing out articles without the necessity of removing the screen from the window, and by the use of my improved catches the screen is locked in either position and when down cannot be unlocked
60 from the outside without cutting the wire-cloth.

While I have described the specific construction of this frame, I do not wish to be limited to this construction, as it is obvious
65 that the side stiles instead of having the rabbet-strip applied to them could be made solid with a vertical groove, and other parts of the

screen could be changed without materially affecting the spirit of the invention. Therefore I do not wish to be limited to the exact
70 construction here shown.

Having thus fully described my invention, what I claim as new and useful is—

1. In a window-screen, a main frame, a center cross-rail dividing the screen in two parts, 75
wire-cloth secured permanently to the upper portion, a supplementary frame covered with wire-cloth fitted to slide in the main frame and normally close the lower portion, a re-
80 movable bead secured to the main frame upon each side at the lower portion of the frame, this bead being flush with the balance of the main frame and allowing for the removal of the supplementary sliding frame when the
85 beads are removed, and means for automatically locking the sliding screen in either its raised or lowered position, as and for the purpose specified.

2. In a window-screen, a main frame consisting of side stiles and top and bottom cross- 90
rails, a central rail dividing the rail horizontally in two parts, wire-cloth permanently secured to the upper portion of the frame, guideways provided upon the inner edge of the side stile, a sliding frame fitted to slide 95
within said guideways, removable beads or strips secured upon each side to the lower portion of the frame below the central rail, said beads or strips forming one side of the
100 guideways and being flush with the balance of the main frame, wire-cloth covering the sliding frame and adapted to slide in close contact with the rear of the center cross-rail, a pin secured to the bottom rail of the slid-
105 ing frame and extending outward therefrom, spring-catches secured to the bottom rail of the main frame and the center cross-rail, the free end of said spring-catches being curved outward and provided with openings adapt-
110 ed to engage the pin so as to lock the frame automatically in either its raised or lowered position, and a knob secured to the lower cross-rail of the sliding frame, as and for the purpose specified.

3. As a new article of manufacture, a screen 115
consisting of a main frame divided horizontally in two parts, the upper portion covered with wire-cloth, a sliding screen adapted to slide in the main frame and normally close the lower half, extension-screens arranged 120
upon each side of the main frame, said extension-screens consisting of side pieces lying in the same plane as the main screen-frame, said side screens sliding in grooves in the top and bottom cross-rails of the main frame, as 125
and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

HENRY L. ROBERTS.

Witnesses:

L. D. HEINRICHS,
L. W. MORRISON.