

No. 668,534.

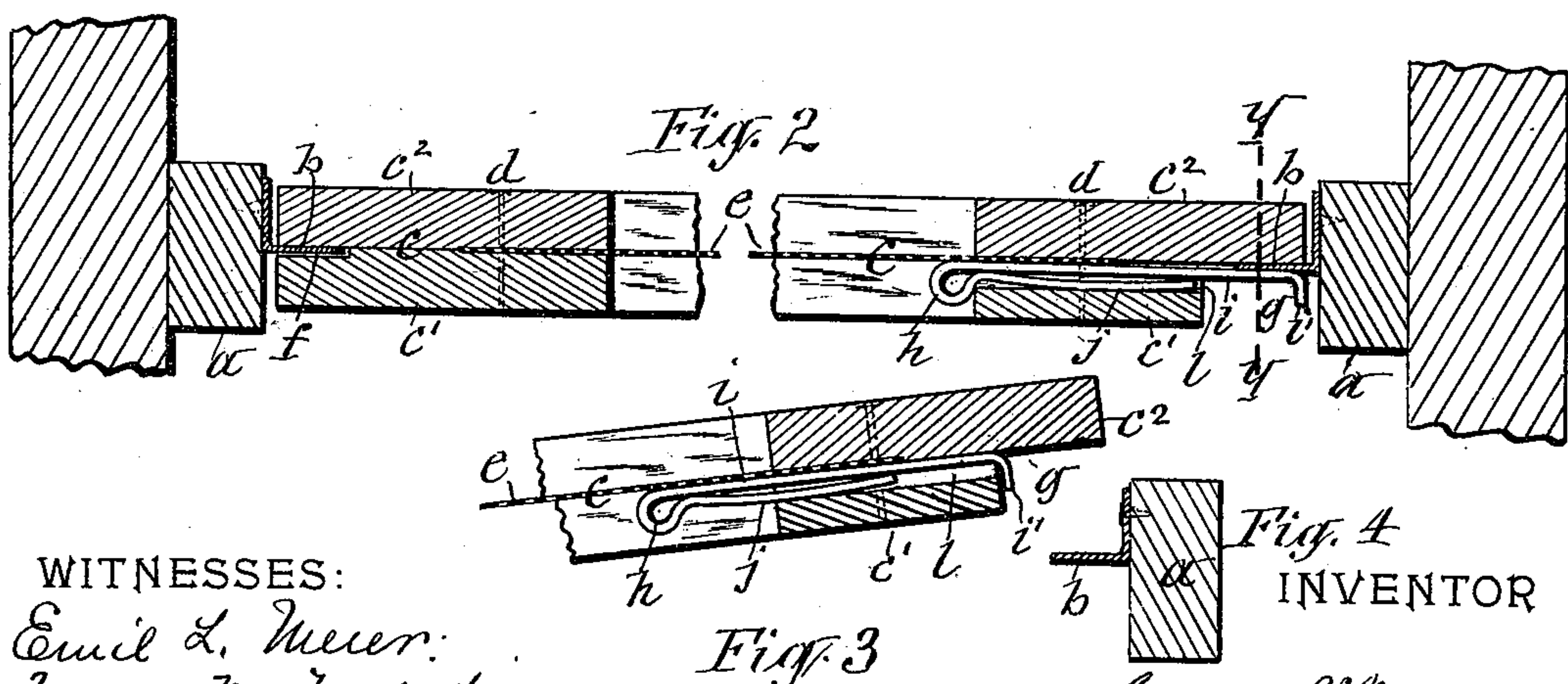
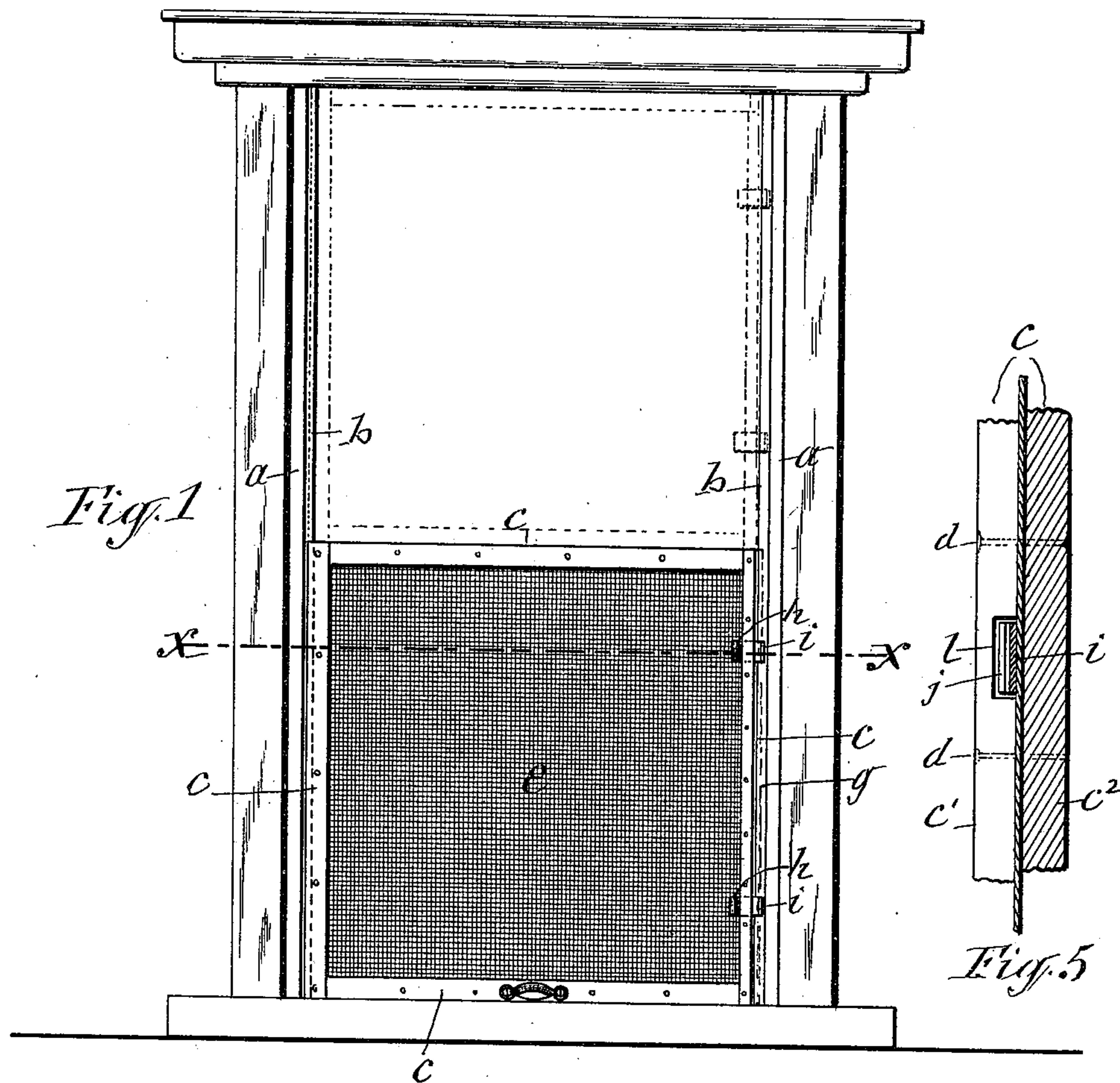
Patented Feb. 19, 1901.

S. V. MERRIMAN.
WINDOW SCREEN.

(No Model.)

(Application filed June 25, 1900.)

2 Sheets—Sheet 1.



WITNESSES:
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Fig. 4
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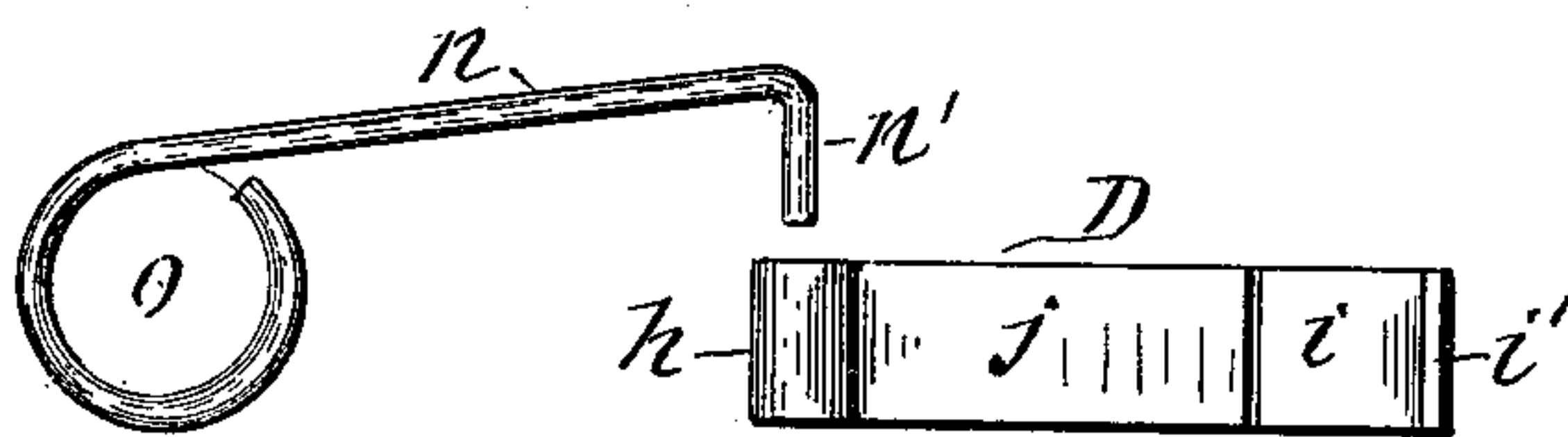
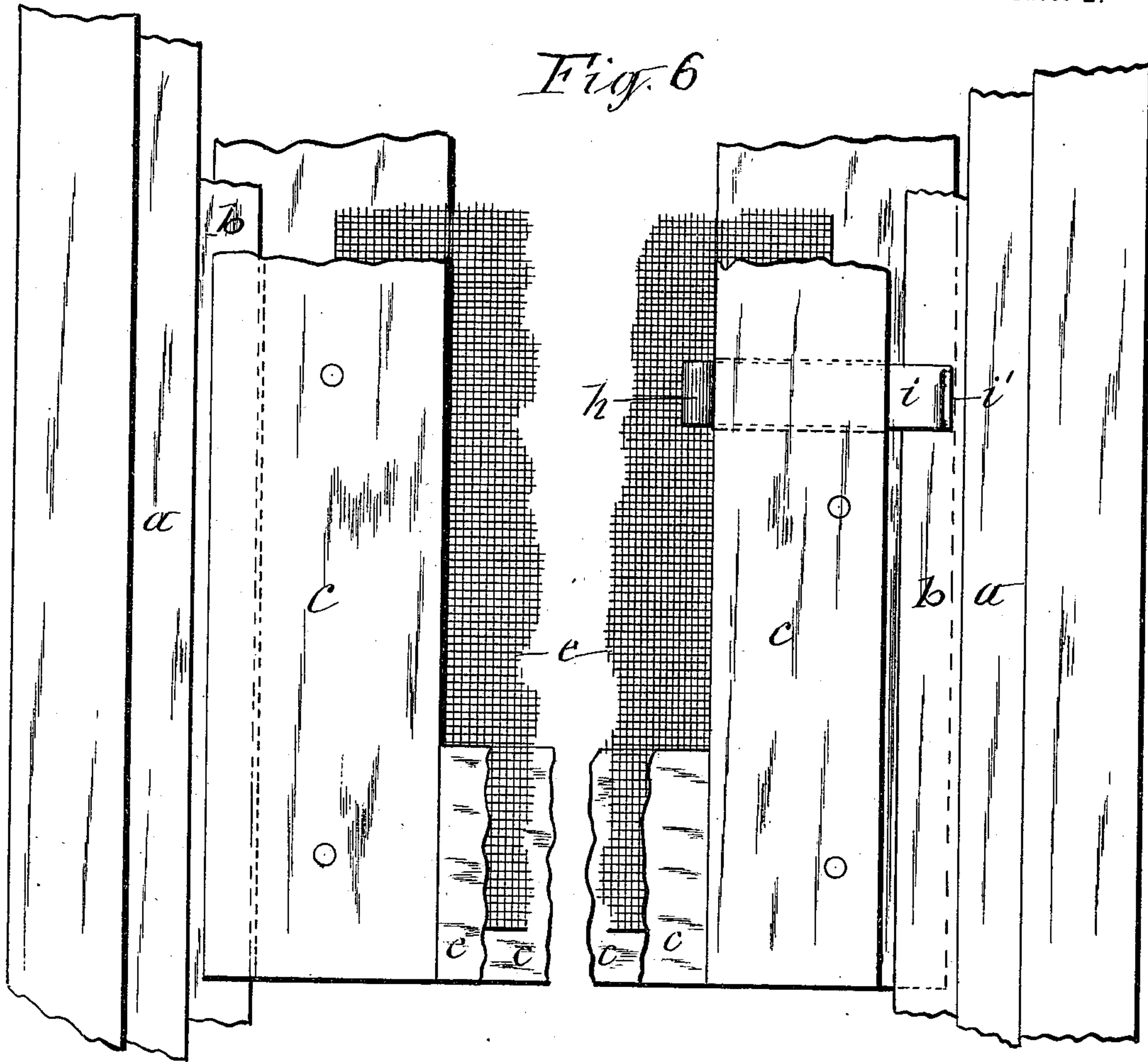


Fig. 7

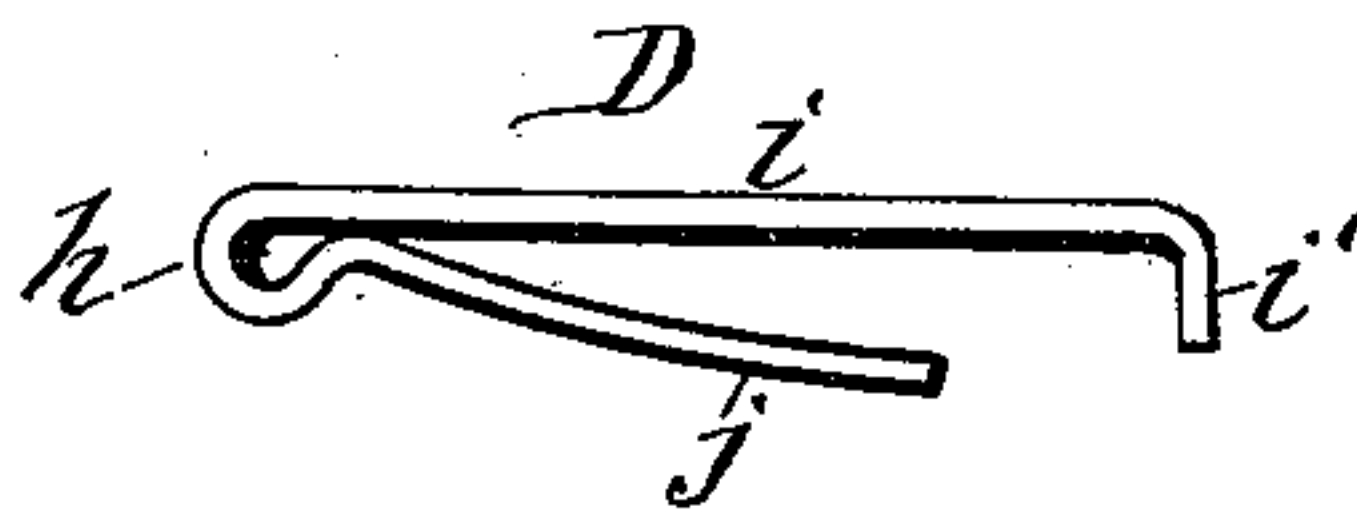


Fig. 8

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UNITED STATES PATENT OFFICE.

SEYMOUR V. MERRIMAN, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN J. LAASS AND HARRIE B. SMITH, OF SAME PLACE.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 668,534, dated February 19, 1901.

Application filed June 25, 1900. Serial No. 21,408. (No model.)

To all whom it may concern:

Be it known that I, SEYMOUR V. MERRIMAN, a citizen of the United States, and a resident of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Window-Screens, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 The object of this invention is to provide a window-screen which shall be simple and inexpensive in construction, convenient in its application to and removal from the window, readily raised or lowered to any desired position in the window, capable of sustaining itself automatically in its raised position, and free from liability of rattling.

20 To that end the invention consists in the novel construction and combination of the component parts of the screen hereinafter described, and set forth in the claims.

25 In the annexed drawings, Figure 1 is an inside view of a window equipped with a screen embodying the invention. Fig. 2 is an enlarged transverse section on line X X in Fig. 1. Fig. 3 is a detached sectional view showing the screen-sustaining clamp in its position for introducing the screen into the window and for removing it therefrom. Fig. 30 4 is a transverse section of one of the guides of the screen. Fig. 5 is a sectional view taken on line Y Y in Fig. 2. Fig. 6 is an enlarged fractional front view of the window-screen sustained in an elevated position in the window, and Figs. 7 and 8 are respectively front and top views of the sustaining-clamp of the screen.

Similar letters of reference indicate corresponding parts.

40 *a a* designate the vertical outer strips or so-called "stops" of a window-frame.

b b denote the track-rails of the window-screen, which rails are preferably formed of angle-iron or metallic strips bent L shape in cross-section and each fastened at one of its sides to one of the aforesaid stops *a a* by means of brads, nails, or screws or other suitable means, as more clearly shown in Fig. 4 of the drawings.

50 *c* represents the frame of a window-screen. This frame is formed double or of two layers of

wooden strips united by nails or brads passing through the two thicknesses or layers of wood, as shown at *d*. Between the said two layers are fastened the margins of the wire 55 screen or screen-cloth *e*. The outer vertical edge of one side of the frame *c* is provided with a guide-groove *f*, preferably formed by a rabbet cut in one of the two layers of wood. Said groove is of proper size to receive the 60 projecting portion of the adjacent track-rail *b* and cause said rail to be closely embraced by the portion of the frame, and thus prevent said side of the frame from rattling. The opposite vertical edge of the frame is pro- 65 vided with a rabbet *g*, which extends the entire height of the frame and is formed by a reduction of the width of the inner wooden layer *c'* of the frame, causing the outer layer *c''* of said frame to project and engage the 70 outer face of the track-rail *b*, as clearly shown in Fig. 2 of the drawings. To sustain the screen-frame on this latter track-rail *b* in such a manner as to effectually prevent rattling and permit the screen to be raised and 75 lowered to any desired position in the window and automatically sustain itself in its position and to also permit the screen to be readily inserted in the window and equally as readily removed therefrom when desired, 80 I employ a combined guide and adjustable antirattling and automatic sustaining clamp *D*, preferably formed in one piece and in a simple and inexpensive manner. This combined guide and clamp is formed of a strip 85 or leaf of spring metal, preferably of spring-steel, which leaf is bent transversely into a loop *h* a suitable distance from the center of its length. The main portion of the longer arm *i* of the leaf is preferably maintained 90 straight and is somewhat longer than the width of the outer layer *c''* of the frame, so as to cause the end of the arm *i* to bear on the inner side of the adjacent track-rail *b*. Said arm is terminated with an offset *i'* toward the inner face of the screen to form a 95 stop for preventing accidental withdrawal of the combined guide and clamp *D* from its seat in the screen-frame, as shown in Fig. 3 of the drawings. The shorter arm *j* of said 100 clamp is made, preferably, of a length equal to the width of the inner layer of the screen-

frame to conceal said arm when the clamp is in use, as shown in Fig. 2 of the drawings. This short arm *j* lies over the inwardly-facing side of the longer arm *i* and is forced from said side by the spring action of the metallic leaf from which the clamp is formed, as illustrated in Fig. 8 of the drawings. The arm *j* is slightly bowed and constitutes the spring of the clamp. There are usually two such clamps required, one near the top and the other near the bottom of the screen-frame. These clamps are connected to the screen-frame during the construction of said frame and are inserted into seats formed in the screen-frame by transverse grooves *l* cut in the side of the inner layer *c'*, facing the outer layer *c²* of said frame, and when the clamps are thus secured to the screen-frame the spring-arms *j* of the clamps press the longer arms *i* thereof toward the outer layer *c²* of the frame, and when the screen is placed in the window the ends of said long arms *i* exert their pressure against the inner side of the track-rail *b* and press the outer layer *c²* of the screen-frame into frictional contact with the outer side of the track-rail *b*. Said rail is thus gripped sufficiently tight to sustain the screen in its raised position. The spring-arm *j* also affords to the clamp *D* a frictional hold in its seat *l* to prevent said clamp from accidentally slipping longitudinally in its said seat and from its hold on the track-rail.

The loop *h* on the clamp affords means for withdrawing the clamp from the track-rail when it is desired to remove the screen from the window. Said withdrawal may be facilitated by the use of a hook *n'*, preferably formed on the end of a wire rod *n*, the opposite end of which is bent into the shape of a loop *o* or other suitable shape to facilitate the manipulation of said rod. The hook *n'* is shaped to enter into the loop *h* of the spring-clamp *D*, and by placing the rod *n* parallel with the said clamp after the hook *n'* has been inserted into the loop *h* and then moving the rod *n* endwise the clamp *D* is moved correspondingly in its seat *l*.

What I claim as my invention is—

1. In combination with a window-frame having vertical track-rails projecting from its sides, a screen-frame formed with a rabbet extending the length of the vertical edge of the said screen-frame and provided with transverse grooves at said rabbet, and combined guides and clamps consisting of spring-leaves seated in said grooves and disposed to exert their pressure on one side of the track-rail and press the screen-frame into frictional contact with the opposite side of said rail as set forth.

2. In combination with a window-frame having vertical track-rails projecting from its sides, a screen-frame formed of two layers of

wood and provided in one of its vertical edges with a vertical guide and the opposite vertical edge provided with a rabbet formed by a reduction of the width of one of the layers of the frame, and said layer provided with transverse grooves, and spring-clamps seated in said grooves and disposed to exert their pressure on one side of the track-rail and press the screen-frame into frictional contact with the opposite side of said rail as set forth.

3. In combination with a window-frame having vertical track-rails projecting from its sides, a screen-frame formed with a vertical guide in one of its edges and with a rabbet and transverse grooves in the opposite edge, combined guides and clamps each consisting of a spring-leaf bent transversely and forming a spring-arm and a clamping-arm and seated with both of its arms in one of the aforesaid transverse grooves, said clamping-arm bearing on one side of the track-rail and pressing the screen-frame into frictional contact with the opposite side of said rail as set forth.

4. In combination with a window-frame having vertical track-rails projecting from its sides, a screen-frame formed with a vertical guide in one of its edges and with transverse grooves in the opposite edge, and spring-leaves, each bent transversely and forming a spring-arm and a clamping-arm and seated with both arms in one of the aforesaid grooves, the spring-arm lying over the clamping-arm and bowed therefrom to press the clamping-arm onto one side of the track-rail and press the screen-frame into frictional contact with the opposite side of said rail as set forth and shown.

5. In combination with a window-frame having vertical track-rails projecting from its sides, a screen-frame composed of two layers of wood and provided in one of its vertical edges with a vertical guide, and in the opposite edge with a rabbet formed by a reduction of the width of the inner layer of the frame and provided in the outer side of said inner layers with transverse grooves, and spring-leaves each bent transversely and forming a spring-arm and a clamping-arm and with a loop at the junction of said arms and a stop on the end of the clamping-arm, each of the leaves seated with both arms in one of the aforesaid grooves and movable longitudinally, the spring-arm being bowed to obtain frictional hold in the groove and to press the clamping-arm against one side of the track-rail and force the screen-frame into frictional contact with the opposite side of said rail substantially as set forth and shown.

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Witnesses:

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WILL H. MEIER, Jr.