

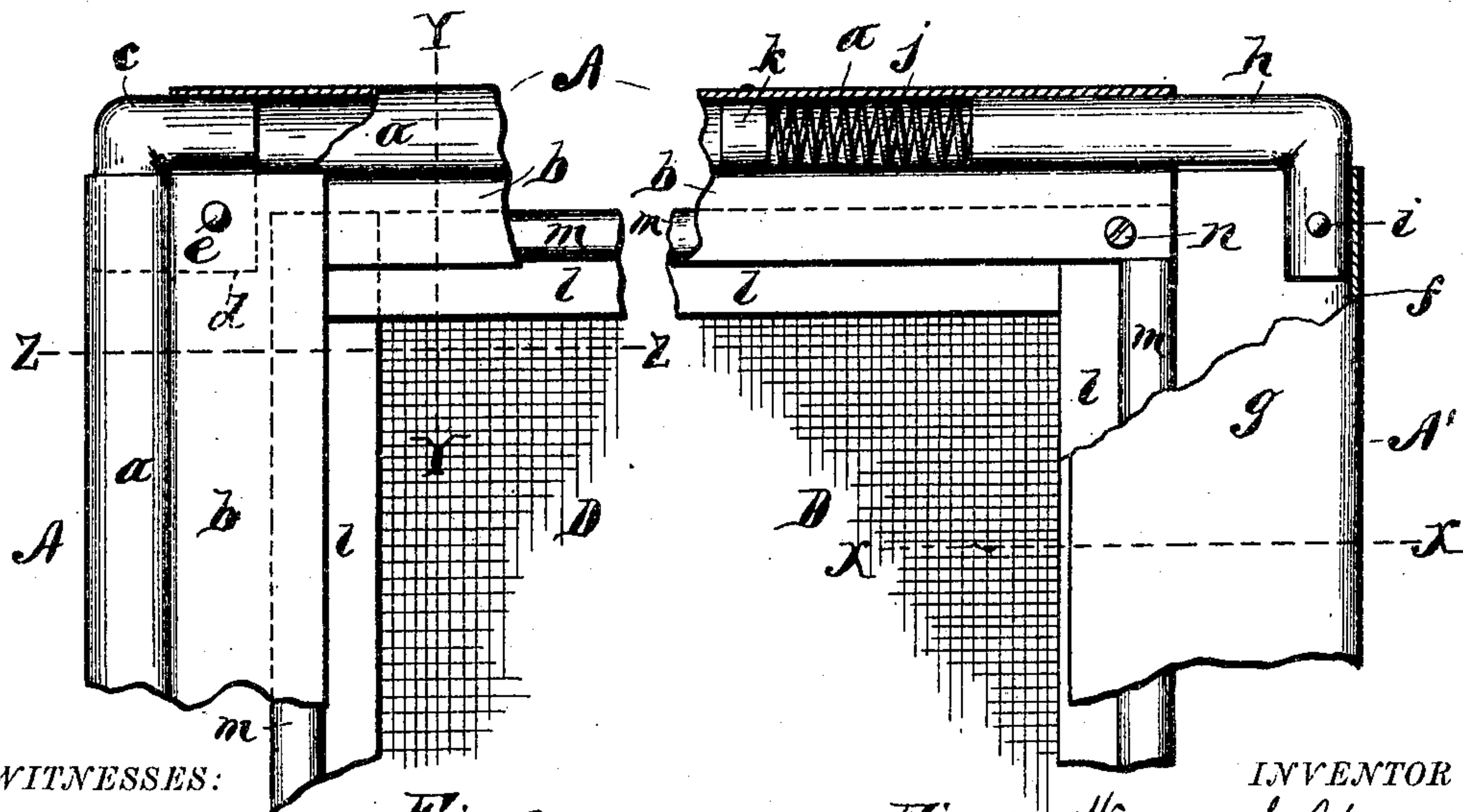
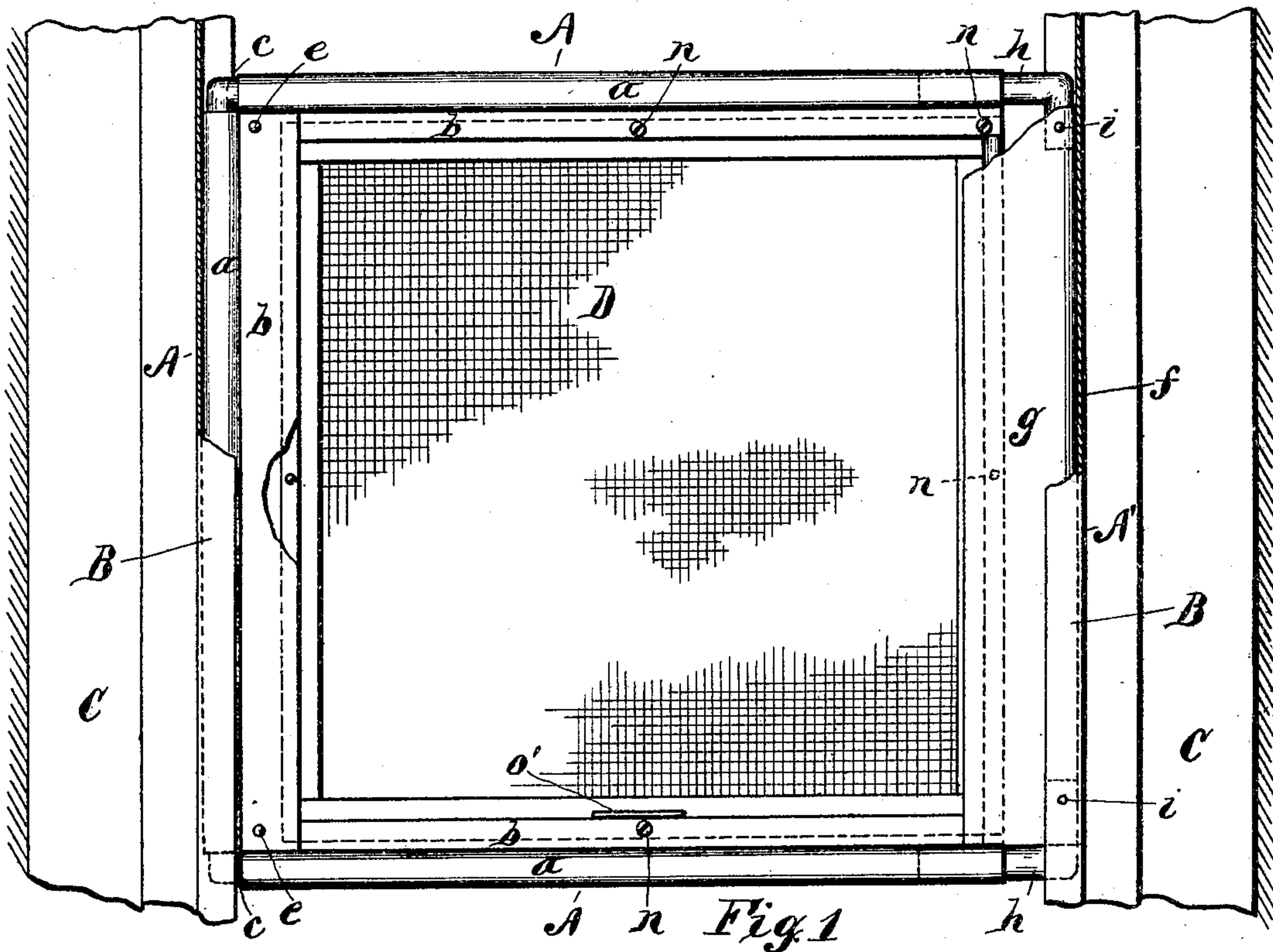
No. 794,469.

PATENTED JULY 11, 1905.

W. E. SHERWOOD.
WINDOW SCREEN.

APPLICATION FILED FEB. 10, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

G. H. Fulmer,
J. J. Laess

Fig. 2

INVENTOR
Fig. 3 William E. Sherwood
By E. Laess
ATTORNEY.

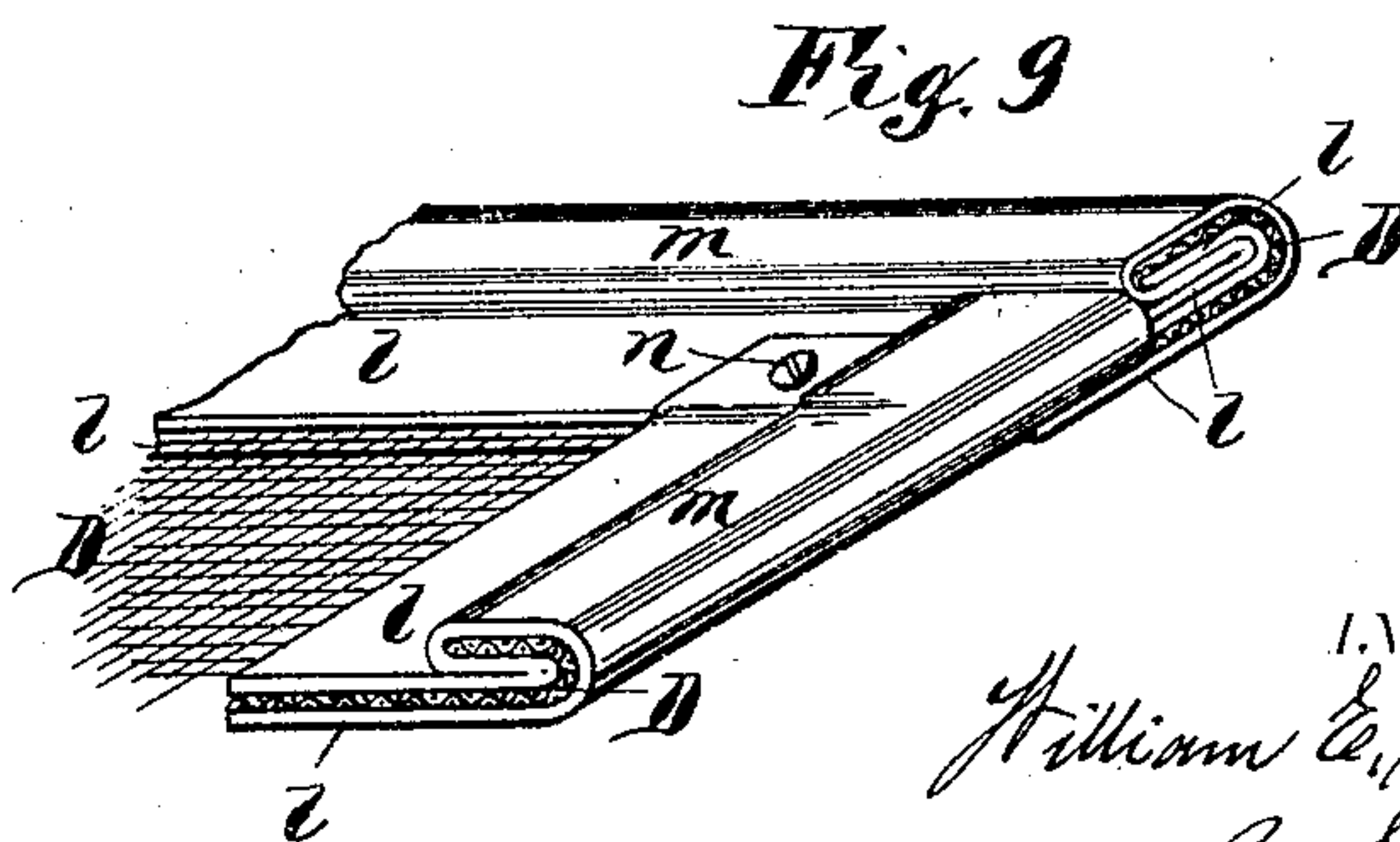
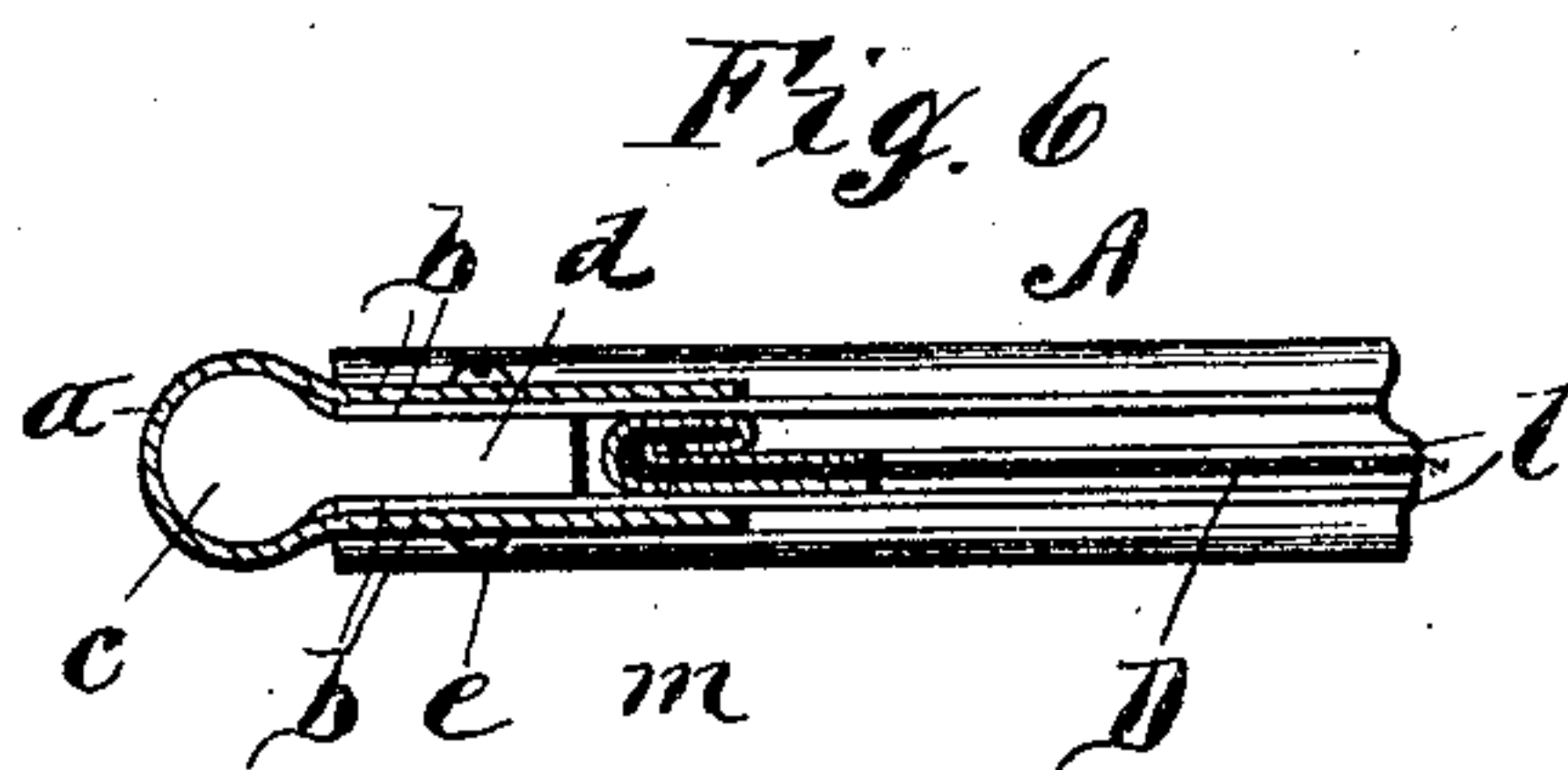
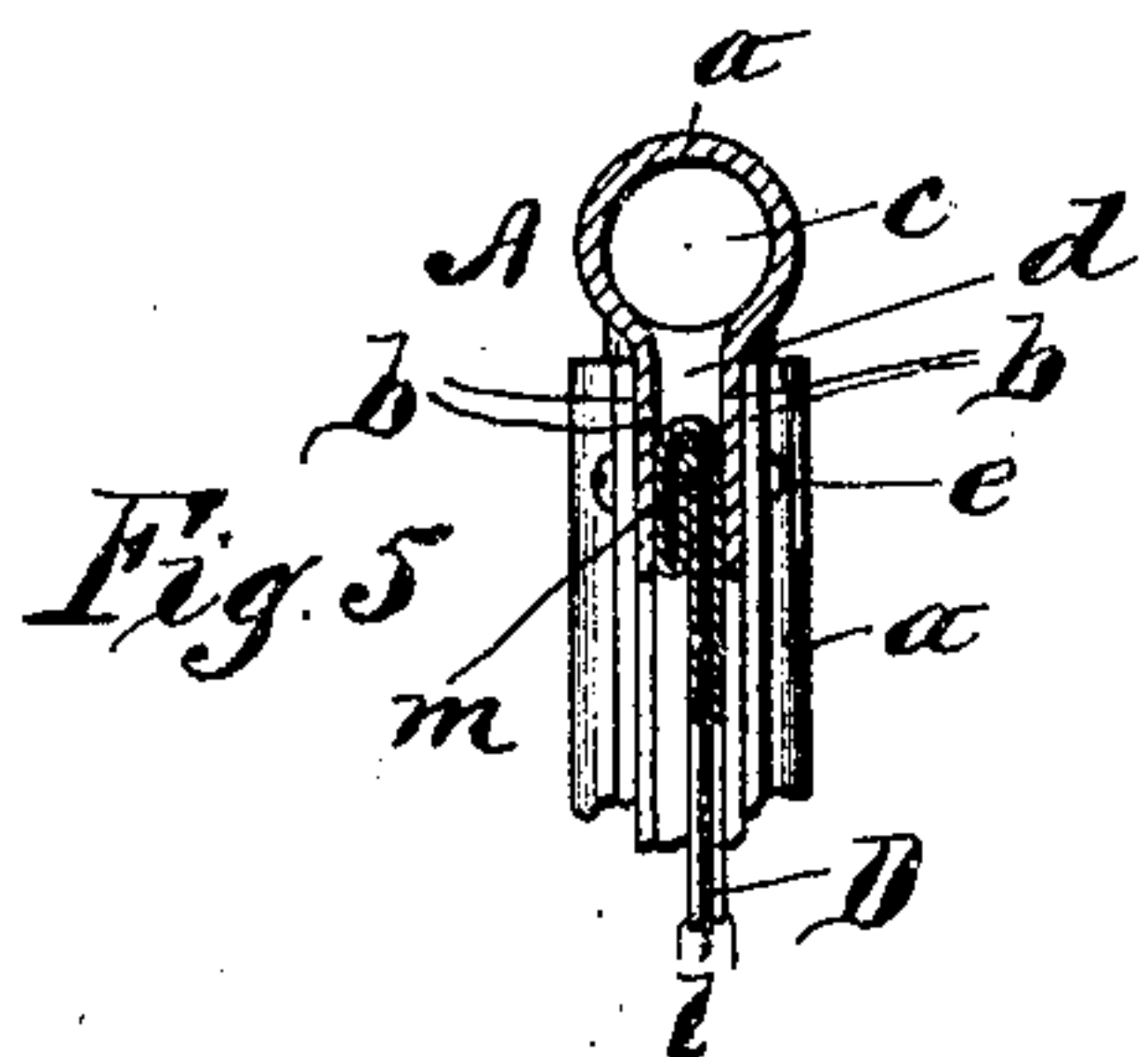
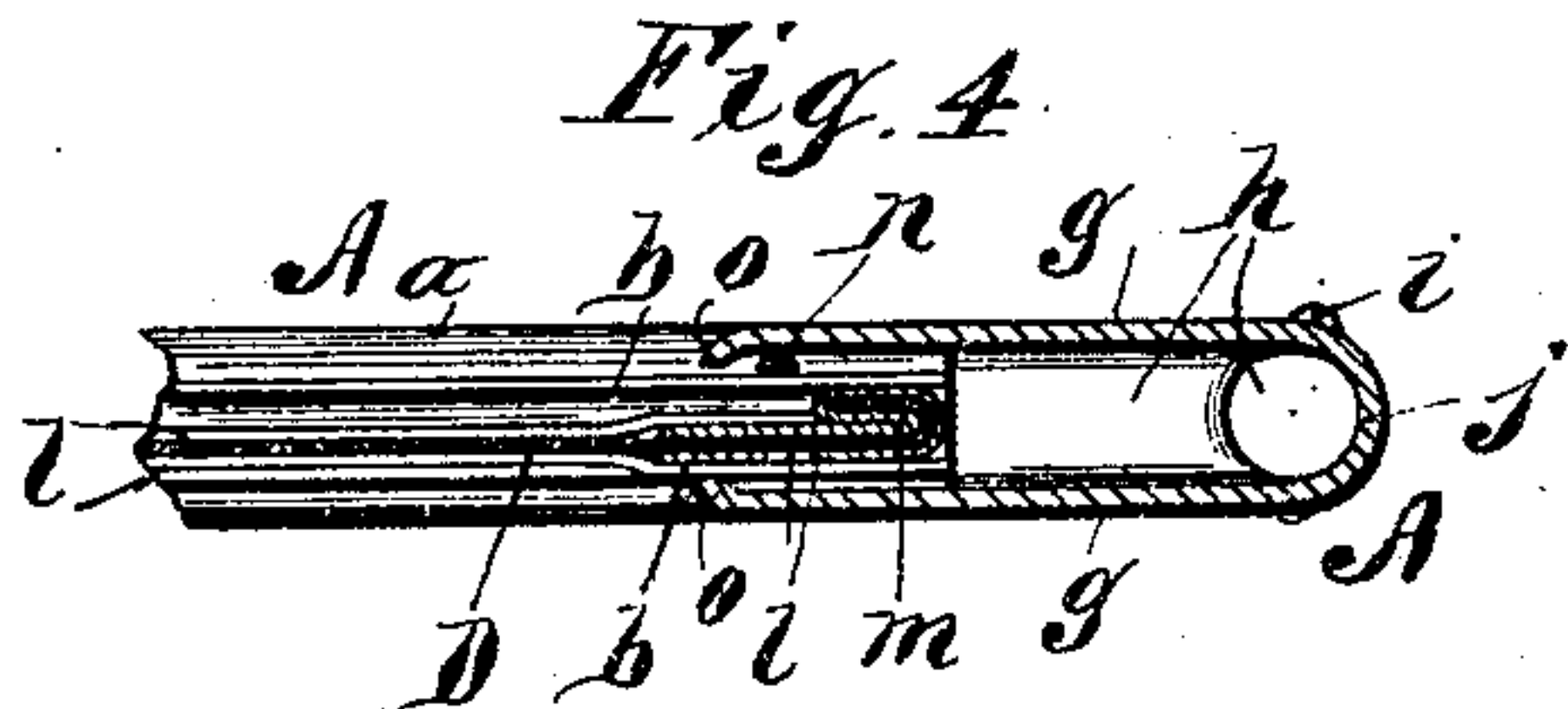
No. 794,469.

PATENTED JULY 11, 1905.

W. E. SHERWOOD.
WINDOW SCREEN.

APPLICATION FILED FEB. 10, 1905.

2 SHEETS—SHEET 2.



WITNESSES:

Lg. H. Fulmer.
 J. J. Lantz.

INVENTOR

INVENTOR
William E. Sherwood

By E. L. Lusk

ATTORNEY:

UNITED STATES PATENT OFFICE.

WILLIAM E. SHERWOOD, OF ONEIDA, NEW YORK, ASSIGNOR TO SHERWOOD METAL WORKING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 794,469, dated July 11, 1905.

Application filed February 10, 1905. Serial No. 245,041.

To all whom it may concern:

Be it known that I, WILLIAM E. SHERWOOD, of Oneida, in the county of Madison, 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.

This invention relates to the class of window-screens in which the frames are composed of sheet metal and slide in guides or tracks secured to the window-frame and at the same time are automatically adjustable to accommodate themselves to window-frames having varying widths.

The main object of this invention is to produce a metallic window - screen which shall be simple, strong, and durable in construction, efficient in its operation, and at the same time inexpensive to manufacture.

Another object is to produce a construction which shall permit of quick and easy placement in the window-frame and removal therefrom and, furthermore, shall permit the wire-cloth to be readily removed and a new piece to be applied when required.

To that end the invention consists in the novel construction and arrangement of the component parts of the window-screen hereinafter fully described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a front view of my improved window-screen. Figs. 2 and 3 are enlarged detailed front views of the upper corner portions of the screen, partly broken away. Fig. 4 is a transverse section on the dotted line X X in Fig. 3. Fig. 5 is a vertical section on line Y Y in Fig. 2. Fig. 6 is a transverse section on line Z Z in Fig. 2. Figs. 7 and 8 are side and end views, respectively, of the corner-piece of the main or outer frame; and Fig. 9 is a perspective view of a corner portion of the inner or secondary frame.

Similar letters of reference indicate corresponding parts.

A A A denote the top, bottom, and one of the side members of the outer or main frame

of the screen, and A' denotes the other side member thereof, which is adjustable, as will be shortly described. This frame is supported slidably in vertical guides or tracks B B, preferably formed of metal and fastened to the window-frame C in the well-known manner. The said frame members A A A are each composed of a sheet-metal plate folded longitudinally at the center of its width to form a tubular marginal channel *a* and two inwardly-projecting parallel flanges *b b*. These frame members are rigidly united by metallic L-shaped corner-pieces *c c*, which are solid and are inserted into the ends of the channels *a a*. Said corner-pieces are formed with webs *d d*, which are embraced by the flanges of the top and bottom members A of the frame, which flanges are in turn embraced by flanges of the side member A', and through said parts pass rivets *e e*. These webs *d d* serve as spacing-blocks maintaining the flanges proper distances apart to permit the insertion of the secondary or wire-cloth frame hereinafter described.

The frame member A' is composed of a sheet-metal plate, folded longitudinally at the center of its width to form a channel *f*, and two inwardly-extending parallel wide strips *g g*, which loosely embrace the secondary or screen-frame proper, which will be shortly referred to. In the ends of the channel of said frame member A' are rigidly secured metallic L-shaped corner-pieces *h h* by means of rivets *i i*. Said corner-pieces slide in the end portions of the channels *a a* of the top and bottom frame members. In each of said channels *a* is disposed a coiled spring *j*, which bears at its inner end against a block or diaphragm *k*, rigidly secured therein and pressing with its opposite or outer end against the corner-piece *h*, rigidly secured to the frame member A', as aforesaid. Said springs serve to force the said frame member outward, and thereby maintain the frame in the guides B B. By this arrangement the said frame member A' is permitted to yield sidewise in relation to the window, and thereby rendering the main screen-frame automatically adjustable to ac-

commodate itself to any variations that may exist in the distance between the guides or tracks.

By forming the aforesaid frame members 5 or plates A A A A' in the manner described it will be observed that a double frame is produced which possesses great strength and rigidity. I do not, however, limit myself to the means employed for uniting the frame 10 members as shown, as they may be otherwise fastened. The members *l l l l* of the secondary frame also consist of metallic plates which may be united by any suitable means, and to this frame the usual wire cloth or netting D is 15 secured in any convenient manner. I prefer, however, to fold each of these plates longitudinally upon itself at the center of its width to produce a double frame and insert the marginal portions of the wire-cloth therein, so as 20 to abut against the folded portion. I then impart a second fold to the plates and insert wire-cloth, thereby firmly clenching the wire-cloth to the frame. This second fold serves to tightly stretch the wire-cloth and produce 25 a bead, as indicated at *m*. This secondary frame is inserted with its beaded portion endwise between the flanges *b b* of the main frame and secured removably therein by means of bolts or screws *n n*. The application of the 30 secondary frame to and its removal from the main frame is readily permitted by detaching the main-frame member A'. The strips of the said frame member are yielding and have their free edges deflected inwardly to form 35 lips, as indicated at *o o*. These lips are adapted to engage the heads of the bolts or screws and their nuts, which constitute stops limiting the outward movement imparted to said frame member by the aforesaid coiled springs, 40 thereby maintaining the frame intact when removed from the guides or tracks B B. In order to detach the frame member A', its strips are sprung apart, so as to cause the lips to disengage from the said heads and nuts of 45 the bolts.

It will be understood that I do not limit myself to the form of stops shown, as other means may be employed for the purpose. The ends of the strips of the meeting mem- 50 bers of the secondary frame are lapped one onto another, and one of the strips of each member is extended beyond its companion strip and folded onto the other member with the wire-cloth, thus producing an interlocking joint, as clearly shown in Fig. 9 of the 55 drawings.

It will be seen that the secondary frame can be readily removed from the main frame by the removal of the bolts or screws *n n*. 60 It will also be observed that the main frame can be conveniently removed from its guides or tracks.

o' denotes a handle which is employed for raising and lowering the screen and may be 65 of any suitable form. I prefer, however, to

construct the same from a piece of sheet metal and fasten the same to the lower member of the main or outer frame.

What I claim is—

1. In combination with a pair of vertical 70 guides secured to the window-frame, of a screen comprising a main frame sliding in said guides and having one of its side members rigidly united with the top and bottom members, and the other side member adjustable, 75 a secondary frame having its members rigidly united and secured removably within the main frame, and the wire-cloth secured to said secondary frame as set forth.

2. A window-screen comprising a main 80 frame composed of top and bottom members and side members, one side member being rigidly united with the top and bottom member, and the other side member being movable, 85 springs forcing the latter side member outward, a secondary frame secured removably within the main frame, and the wire-cloth secured to said secondary frame as set forth.

3. A window-screen comprising a main 90 frame composed of top and bottom members and side members, one side member being rigidly united with the top and bottom members, and the other side member being movable, 95 springs forcing said latter side member outwardly, means on the screen limiting the outward movement of said side member, a secondary frame secured removably within the main frame, and the wire-cloth secured to said secondary frame as set forth.

4. In combination with suitably-supported 100 vertical guides, a window-screen comprising a main frame sliding in said guides and composed of top and bottom members and side members, one side member being rigidly 105 united with the top and bottom members, and the other side member being movable, springs supported in the top and bottom members and forcing the latter side member outward, a stop on the screen limiting the outward 110 movement of said side member, a secondary frame secured rigidly and removably within the main frame, and the wire-cloth secured to said secondary frame as set forth.

5. A metallic window-screen comprising a main frame composed of folded members and 115 having one of the members adjustable and detachable, a secondary frame composed of rigidly-united folded members and inserted endwise into said main frame and removable therefrom, and the wire-cloth having its mar- 120 gins folded into the secondary frame members as set forth.

6. A metallic window-screen comprising a double main frame having its top member, 125 bottom member and one side member rigidly united, and the other side member movably connected to said top and bottom members, coiled springs concealed within the latter 130 members and forcing said movable side member outward, a double secondary frame hav-

ing its members rigidly united and secured removably within said main frame, and the wire-cloth secured in the secondary frame as set forth.

5 7. A metallic window-screen comprising a main frame having one of its side members movable horizontally, a secondary frame, the wire-cloth secured to the secondary frame, bolts fastening the latter frame within the
10 main frame and serving as stops to limit the outward movement of the aforesaid side member of the main frame as set forth.

8. A window-screen comprising a metallic main frame composed of folded top, bottom
15 and side members united by metallic corner-pieces, a metallic secondary frame secured removably within said main frame and composed of folded members, and the wire-cloth having its margins clenched into the folds of
20 said secondary frame as set forth.

9. A window-screen comprising a metallic main frame composed of top, bottom and side members, metallic corner-pieces rigidly uniting one side member to the top and bottom
25 members, the other side member being adjustable and having corner-pieces rigidly secured thereto and sliding in the said top and bottom members, a metallic secondary frame secured removably within the main frame,
30 and the wire-cloth secured to said secondary frame as set forth.

10. A window-screen comprising a main frame having its top and bottom members and one side member each consisting of a single
35 sheet-metal plate folded longitudinally at the center of its width, and forming a marginal channel and inwardly-projecting parallel flanges or strips, metallic corner-pieces inserted into said channels and uniting said
40 frame members, the other side member being detachable and adjustable, a metallic secondary frame secured removably between said flanges, and the wire-cloth secured to said secondary frame as set forth.

11. A window-screen comprising a main 45 frame having its top and bottom members and one side member each consisting of a single sheet-metal plate folded longitudinally at the center of its width and forming a marginal channel and inwardly-projecting flanges, me- 50 tallic L-shaped corner-pieces inserted into said channels and formed with webs embraced by said flanges and fastened thereto, the other side member being detachable and adjustable and consisting of a similarly-folded plate, me- 55 tallic L-shaped corner-pieces rigidly secured in said adjustable side member and sliding in the channels of the said top and bottom members, a metallic secondary frame inserted removably between the aforesaid flanges, and 60 the wire-cloth secured to said secondary frame as set forth.

12. A window-screen comprising a main frame having its top and bottom members and one side member each consisting of a sheet- 65 metal plate folded longitudinally at the center of its width and forming a marginal channel and inwardly-projecting parallel flanges, metallic corner-pieces inserted into said channels and rigidly uniting said frame members, 70 the other side member of the frame consisting of a similarly-folded metallic plate, metallic corner-pieces rigidly secured to said side member and sliding in the channels of the top and bottom members, abutments in 75 said channels, coiled springs disposed therein between said abutments and corner-pieces and serving to force the latter side member outward, a metallic secondary frame consisting of rigidly-united folded members and insert- 80 ed removably between the flanges of main-frame members, and the wire-cloth having its margins folded into said secondary-frame members as set forth.

WILLIAM E. SHERWOOD. [L. s.]

Witnesses:

J. J. LAASS,
L. H. FULMER.