

No. 812,490.

PATENTED FEB. 13, 1906.

S. H. GARRETT.
WINDOW SCREEN.

APPLICATION FILED APR. 24, 1905.

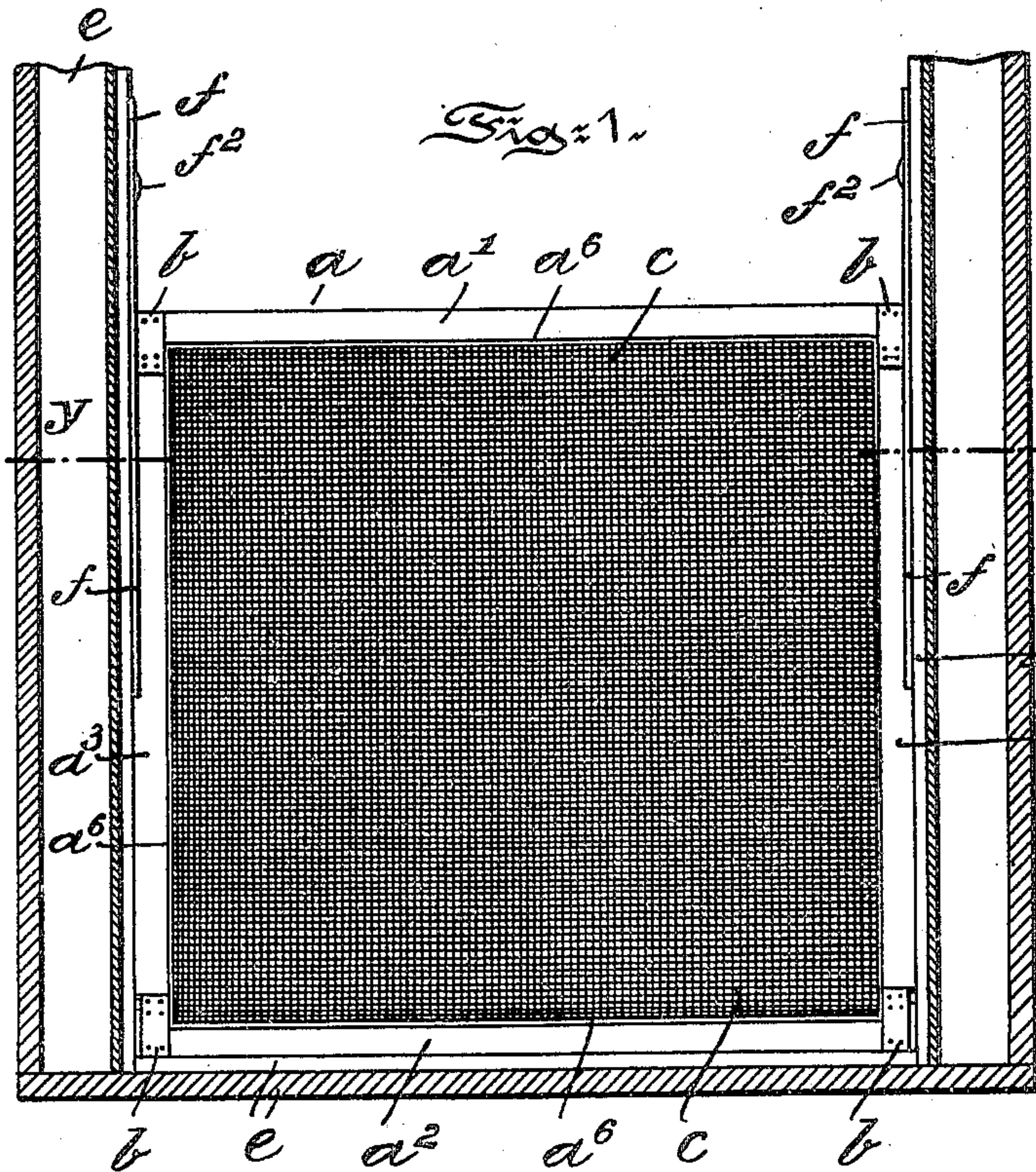


Fig. 6.

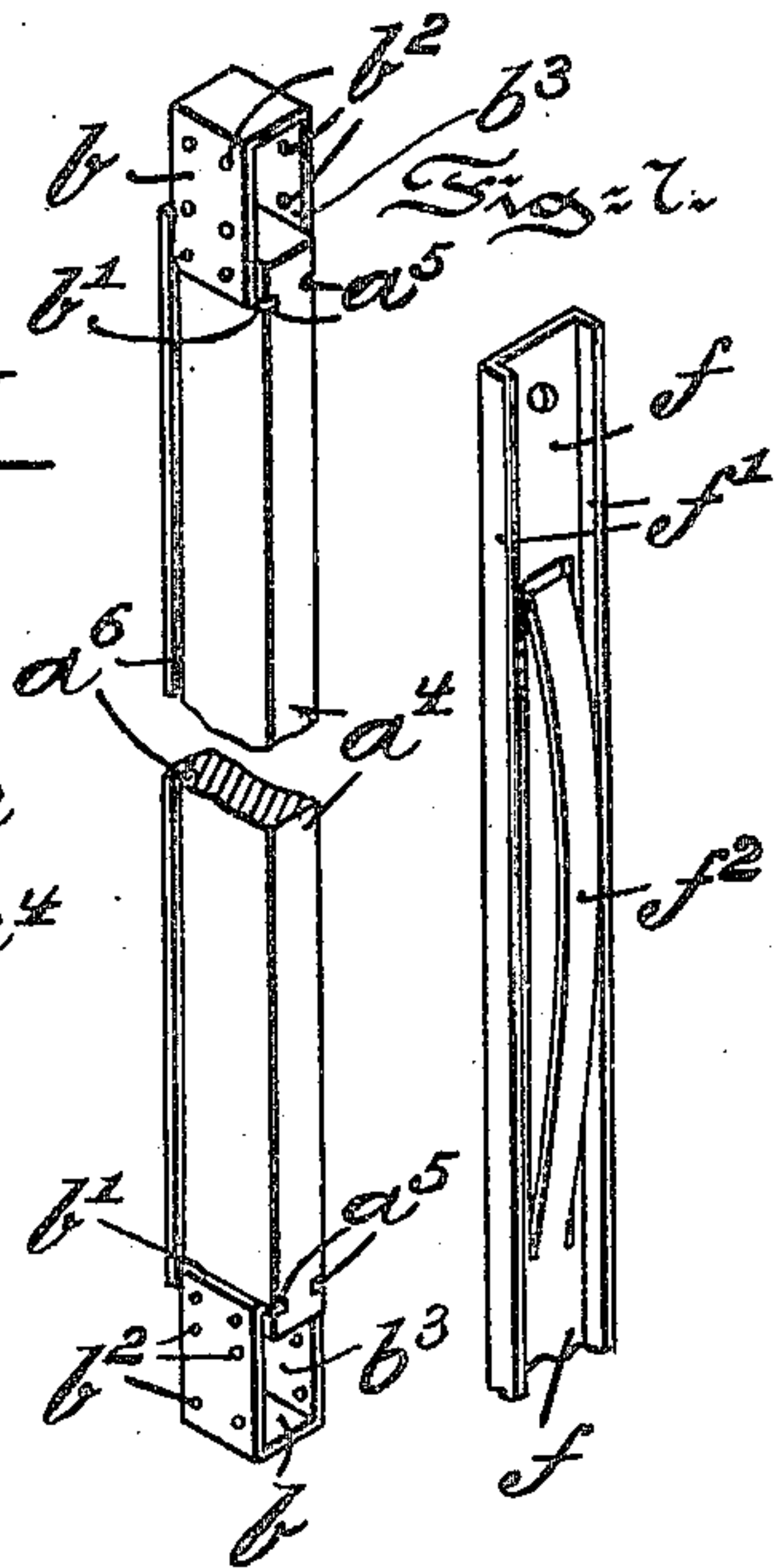


Fig. 7.

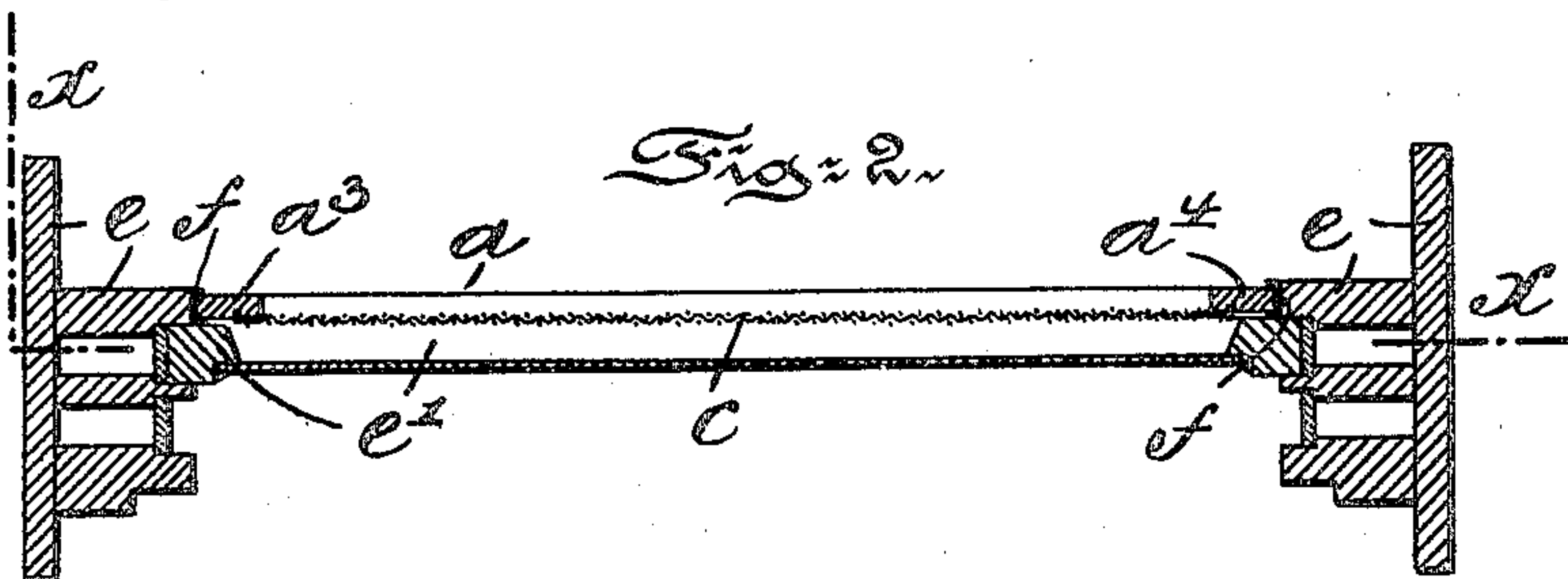
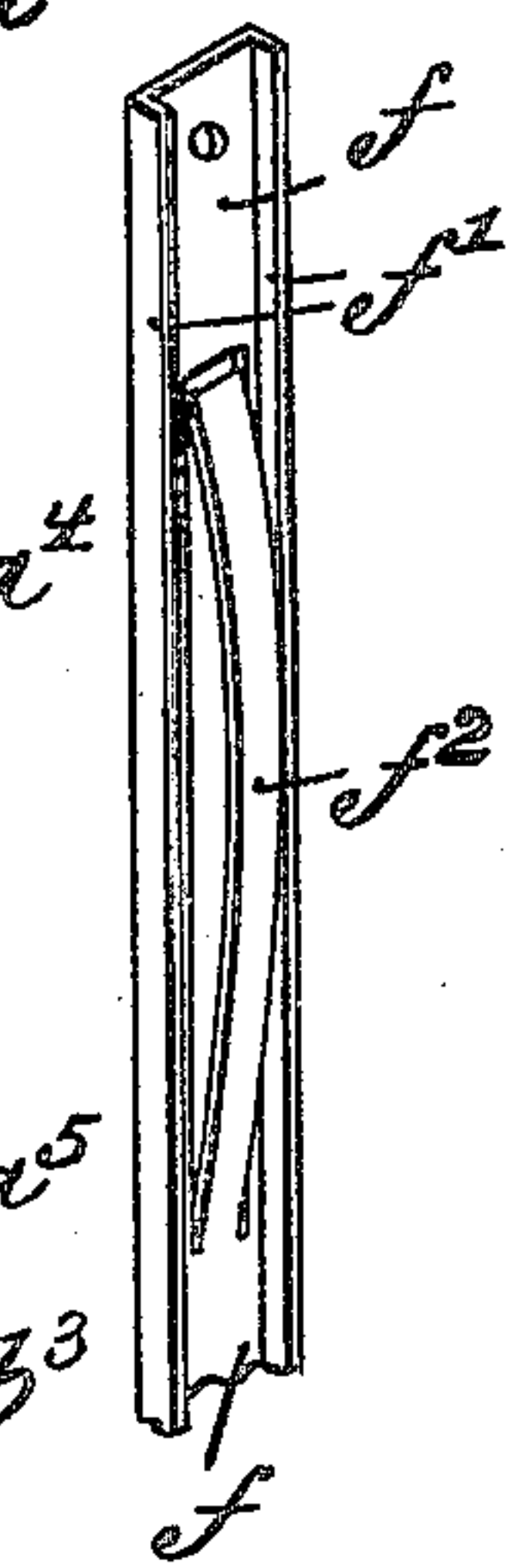


Fig. 8.

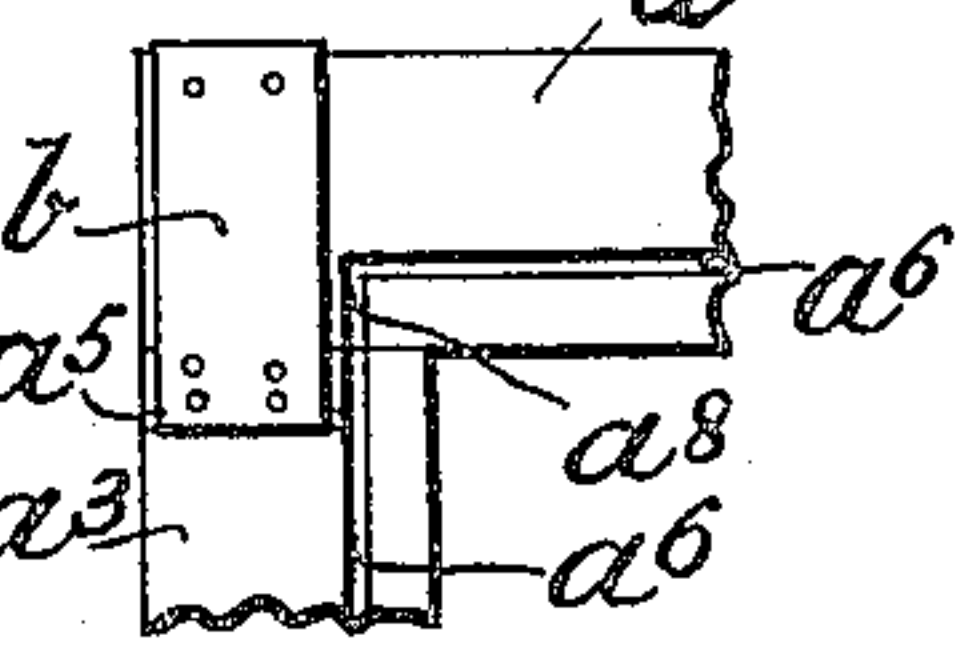


Fig. 5.

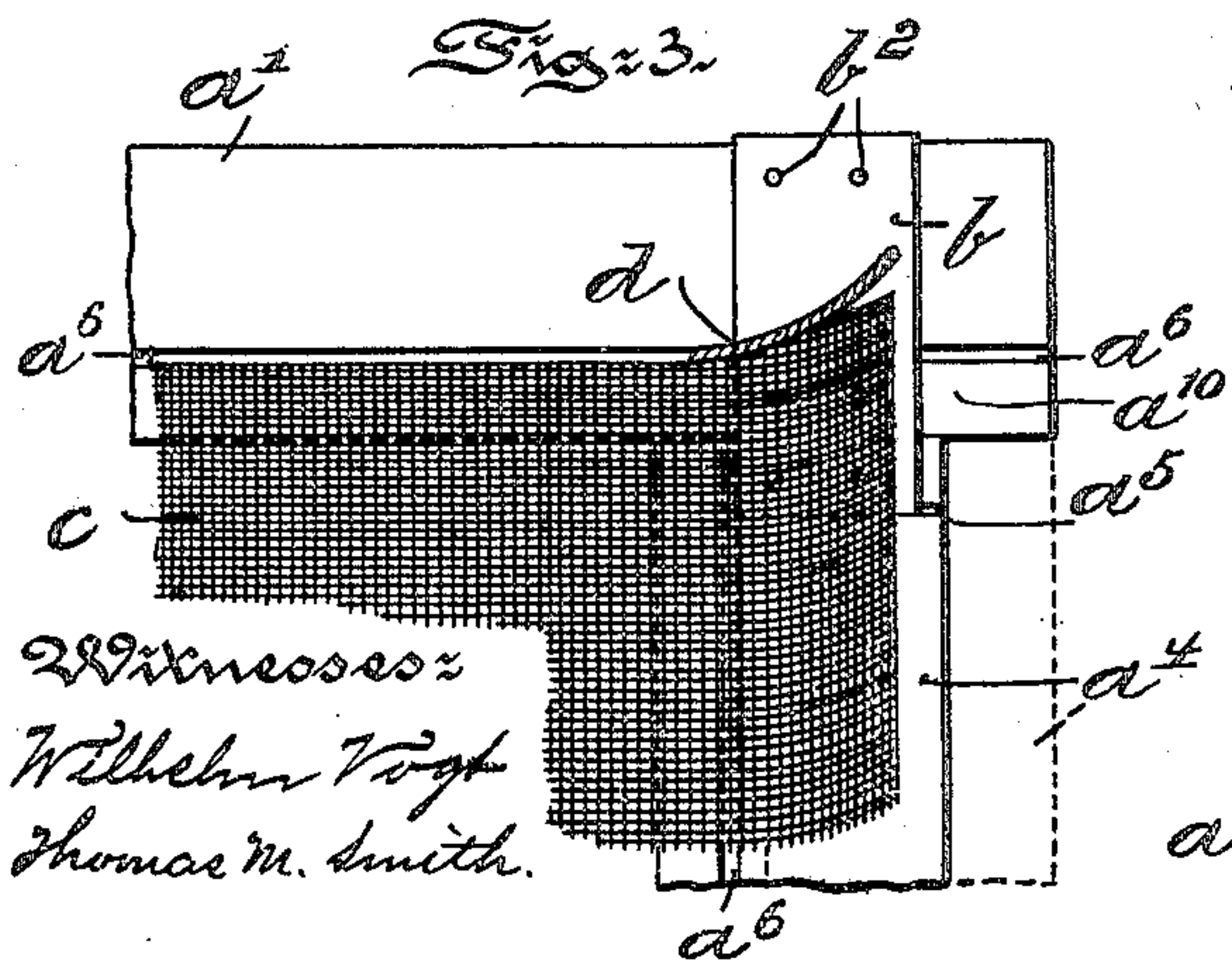
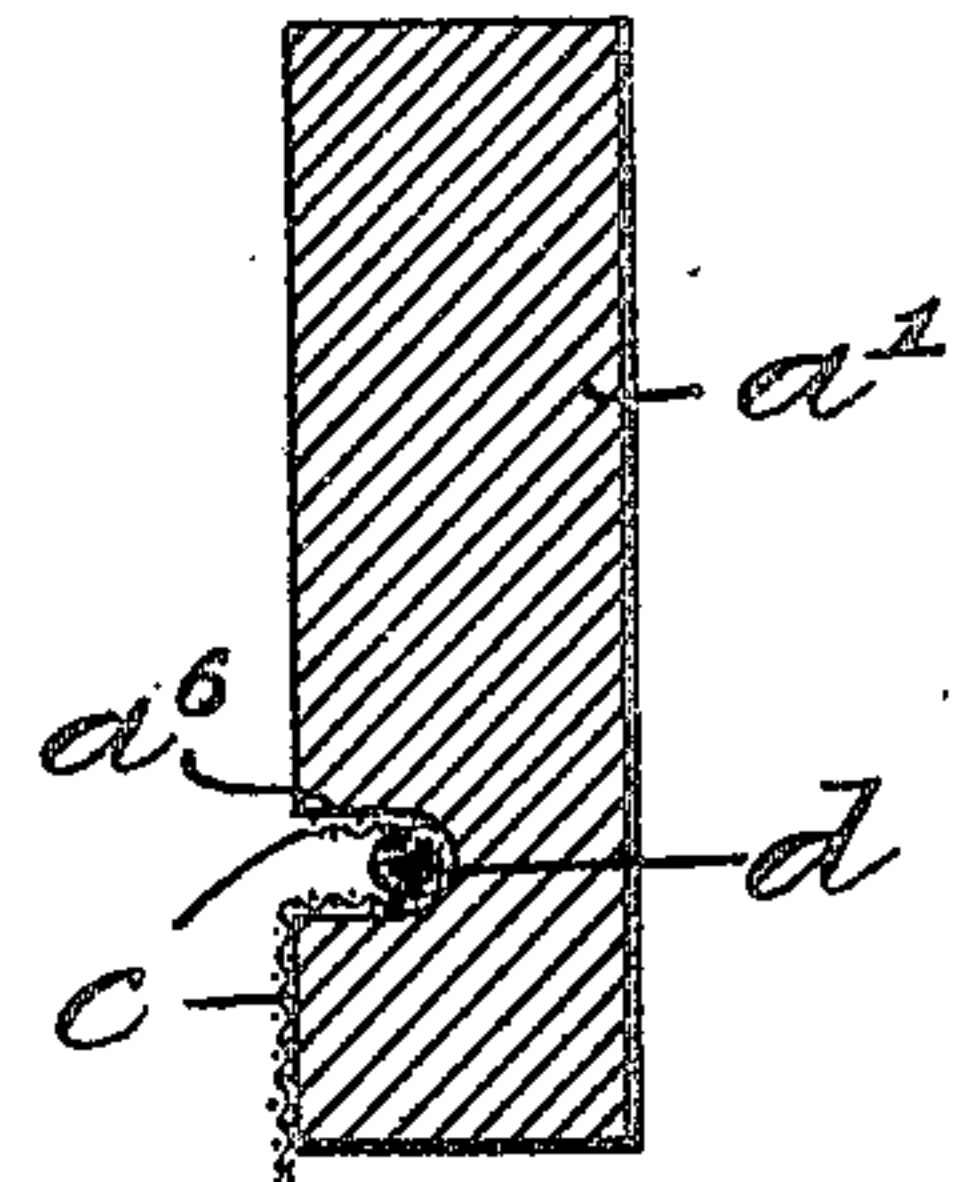
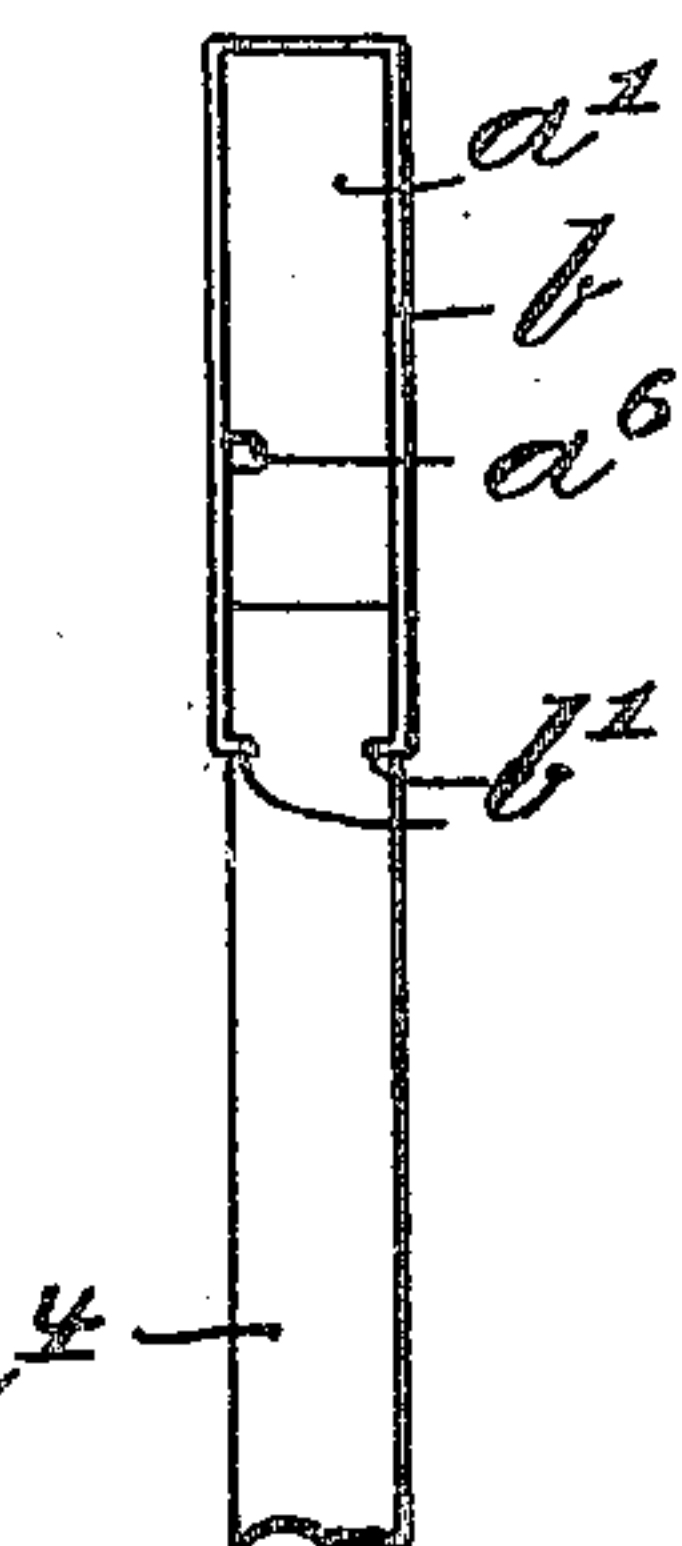


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL H. GARRETT, OF WEST PHILADELPHIA, PENNSYLVANIA.

WINDOW-SCREEN.

No. 812,490.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed April 24, 1905. Serial No. 257,117.

To all whom it may concern:

Be it known that I, SAMUEL H. GARRETT, a citizen of the United States, residing at West Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

My invention has relation to an adjustable and slidable window-screen, and in such connection it relates to the particular construction and arrangement of the same.

The principal objects of my invention are, first, to so arrange a window-screen frame as that the same when too large may be adjusted by any unskilled person to the size required and thereafter rigidly locked in the position given; second, to provide such a window-screen frame with means to permit of the ready connection and disconnection of a flexible fabric thereto; third, to form the members of the frame of plain bars and to provide certain of the same with clamping means to permit of the ready assembling of the bars into a screen-frame and of then separating for shipment, and, fourth, to provide the frame of a window for the screen-frame with means to permit of the holding of the same in any given position within the window-frame.

The nature, scope, and characteristic features of my present invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a vertical sectional view of a window-frame on the line *x x* of Fig. 2 and illustrating in side elevation a window-screen in operative position within the same embodying main features of my present invention. Fig. 2 is a horizontal sectional view of the window-frame and the window-screen arranged therein on the line *y y* of Fig. 1 and also illustrating the manner of slidably connecting the window-screen with the window-frame. Fig. 3 is a detail view, enlarged, illustrating in side elevation the upper right-hand portion of the window-screen and also illustrating the manner of disengaging a portion of a flexible fabric therefrom and the adjustment of one member of the screen-frame for fitting the same to a window-frame. Fig. 4 is an end elevational view of Fig. 3. Fig. 5 is a detail view, enlarged, illustrating in cross-section one member of the screen-frame and

the manner of connecting the flexible fabric thereto. Fig. 6 is a perspective view of a member of the screen-frame provided with clamps at each end. Fig. 7 is a perspective view of a portion of a guide for the screen-frame and for holding the same in any given position within the window-frame; and Fig. 8 is a detail view, enlarged, and illustrating in side elevation the left-hand upper corner of the frame with the flexible fabric removed therefrom.

Referring to the drawings, *a* is a window-screen consisting of the horizontal members *a'* and *a''* and the vertical members *a³* and *a⁴*, which, as shown in Figs. 3, 4, 5, and 6, are preferably rectangular and oblong in cross-section and consist of plain bars. As shown in Fig. 6, each of the vertical or side members *a³* and *a⁴* of the screen-frame *a* is provided at its ends with a clamp *b*, forming a projecting eye *b³*, into which when the frame *a* is to be assembled the horizontal or plain top and bottom members *a'* and *a''* are slid.

In order to more securely connect the clamps *b* with their respective bars *a³* and *a⁴*, the same are provided with rectangular projections *b'*, engaging a groove *a⁵*, arranged therein. To render the screen-frame *a*, so formed, adjustable, it is only necessary to arrange one of the clamp-bars—for instance, the bar *a⁴*—loose therein and to connect the other bars rigidly with each other by driving nails, staples, or other fastening means through the openings *b²* of the clamps *b* and into the plain bars *a'* and *a''*. Each of the bars *a'*, *a''*, *a³*, and *a⁴* is provided with a groove *a⁶*, into which the end of a flexible fabric *c*—such, for instance, as mosquito-netting—is placed and is held in position therein by a wire or cord *d*, as shown in Fig. 5. This cord *d* by being forced into the groove *a⁶* simultaneously with the flexible fabric *c* draws the fabric taut over the frame *a* and holds the same securely connected therewith by means of glue or cement placed in the groove *a⁶* prior to the introduction of the cord and fabric or by the intervention of nails or staples, which may be driven through the cord and fabric *c* into the frame *a*. One end of the cord *d* adjacent to the bar *a⁴* is permitted to slightly project above the groove *a⁶*, so that the same may be easily disengaged from the frame *a* by being lifted out of the groove *a⁶* in case the frame *a* is too large to be placed in the window-frame *e*, as shown in Fig. 1. This arrangement is only necessary

when the window-screen *a* is placed on the market, in which instance one side of the flexible fabric *c* adjacent to the bar *a*⁴ will be left disconnected to facilitate adjustment of the member *a*⁴. If the screen-frame *a* is too large, the bar *a*⁴ is shifted inward, as shown by dotted and full lines in Fig. 3, until the frame is brought to the required width, after which nails or staples are driven through the openings *b*² of the brackets *b* to rigidly connect this bar *a*⁴ with the horizontal plain bars *a*¹ and *a*². The portions of the bars *a*¹ and *a*² projecting beyond the member *a*⁴, as shown in Fig. 3, are cut off and made flush with the same. The cord *d* of the members *a*¹ and *a*², which have been slightly withdrawn from their respective grooves *a*⁶, as shown in Fig. 3, to permit of the shifting of the member *a*⁴, is now cut off close to the frame *a*, and the loose portion and the fabric *c* is reinserted into the groove *a*⁶. A cord *d* is now placed over the fabric *c*, and both together are forced into the groove *a*⁶ of the member *a*⁴ and fastened in the manner hereinbefore explained. The portion of the fabric *c* extending beyond the groove *a*⁶ of the member *a*⁴ is removed, and the screen-frame *a* is now inserted into the window-frame *e*, with the flexible fabric *c* facing the window-sash *e*¹ thereof, as shown in Fig. 2. This arrangement permits of the raising of the window-sash *e*¹ without permitting insects to pass between the sash and screen *a*, since in this instance the lower portion of the window-sash by resting flush against the flexible fabric *c* will form, in conjunction therewith, an insect-proof closure.

As it is only necessary to shift the bar *a*⁴ to adjust the frame *a* to the required width, the groove *a*⁶ of the bars *a*¹ and *a*², opposite the bar *a*⁴, extends to the end of the bars *a*¹ and *a*², as shown in Fig. 3. As shown in Fig. 8, the groove *a*⁶ at the other end of the bars *a*¹ and *a*² has a rectangular extension *a*⁸, which is in alinement with the groove *a*⁶ of the bar *a*³ and forms a continuation of the same. The flexible fabric *c* can be completely inserted in the grooves *a*⁶ and *a*⁸ at the left-hand end of the frame *a*, whereas at the right-hand end the fabric *c* and cord *d* will rest in the absence of the groove extension *a*⁸ on the ungrooved portion *a*¹⁰ of the bars *a*¹ and *a*² before reaching the groove *a*⁶ of the bar *a*⁴. These portions of the fabric *c* and cord *d* being thus rendered accessible permit of an easy removal of the cord and fabric when the same is torn or is to be replaced by other fabric.

In order to hold the screen *a* in position in the window-frame *e* by placing the same in front of the lower window-sash *e*¹, the frame is provided with guides *f*, preferably formed of a strip of metal having side flanges *f*¹,

which by engaging the screen *a* in the manner shown in Figs. 1 and 2 connect the same with the window-frame *e*. A portion of the strip *f* is cut out and struck upward in the manner shown in Fig. 7 to form a leaf-spring *f*², which when the screen *a* is raised in the window-frame *e* and brought into engagement therewith serves to hold the screen *a* in any given position therein.

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

1. A window-screen, consisting of a series of plain bars and a series of clamp-bars, the clamps of the series of said clamp-bars adapted to be rigidly connected with their respective bars and to form projecting eyes, at both ends of the same, said eyes adapted to receive and to surround the other series of plain bars and to loosely connect the same with said clamp-bars to permit of the sliding of said clamp-bars on said plain bars to required position, means adapted to lock the clamps to said plain bars to form in conjunction with said clamp-bars a substantially rectangular and rigid frame, a flexible fabric, grooves arranged in said plain and clamp bars adapted to receive said flexible fabric and to hold the same taut thereon, and means engaging said grooves and the fabric and adapted to removably connect the same with said bars.

2. A window-screen, consisting of a series of plain bars and a series of clamp-bars, the clamps of said series of clamp-bars adapted to be rigidly connected with their respective bars and to form projecting eyes at both ends of the clamp-bars, said eyes adapted to receive and to surround the other series of plain bars to form in conjunction therewith a rectangular frame, a flexible fabric, a groove extending from end to end in each of said clamp-bars, and a groove having a rectangular extension at one end arranged in each of said plain bars and opposite the groove of the adjacent clamp-bar and an ungrooved portion at the other end, said flexible fabric adapted to be inserted in the grooves of said bars and to rest upon the ungrooved portion of said plain bars to permit of a ready engagement and removal of the fabric from said grooves, and means engaging said grooves and the fabric and adapted to removably connect the same with said bars.

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

SAMUEL H. GARRETT.

Witnesses:

J. WALTER DOUGLASS,
THOMAS M. SMITH.