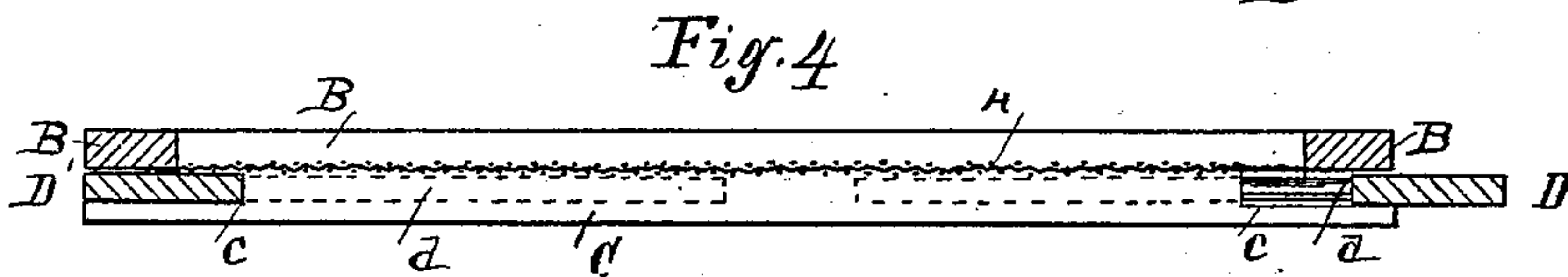
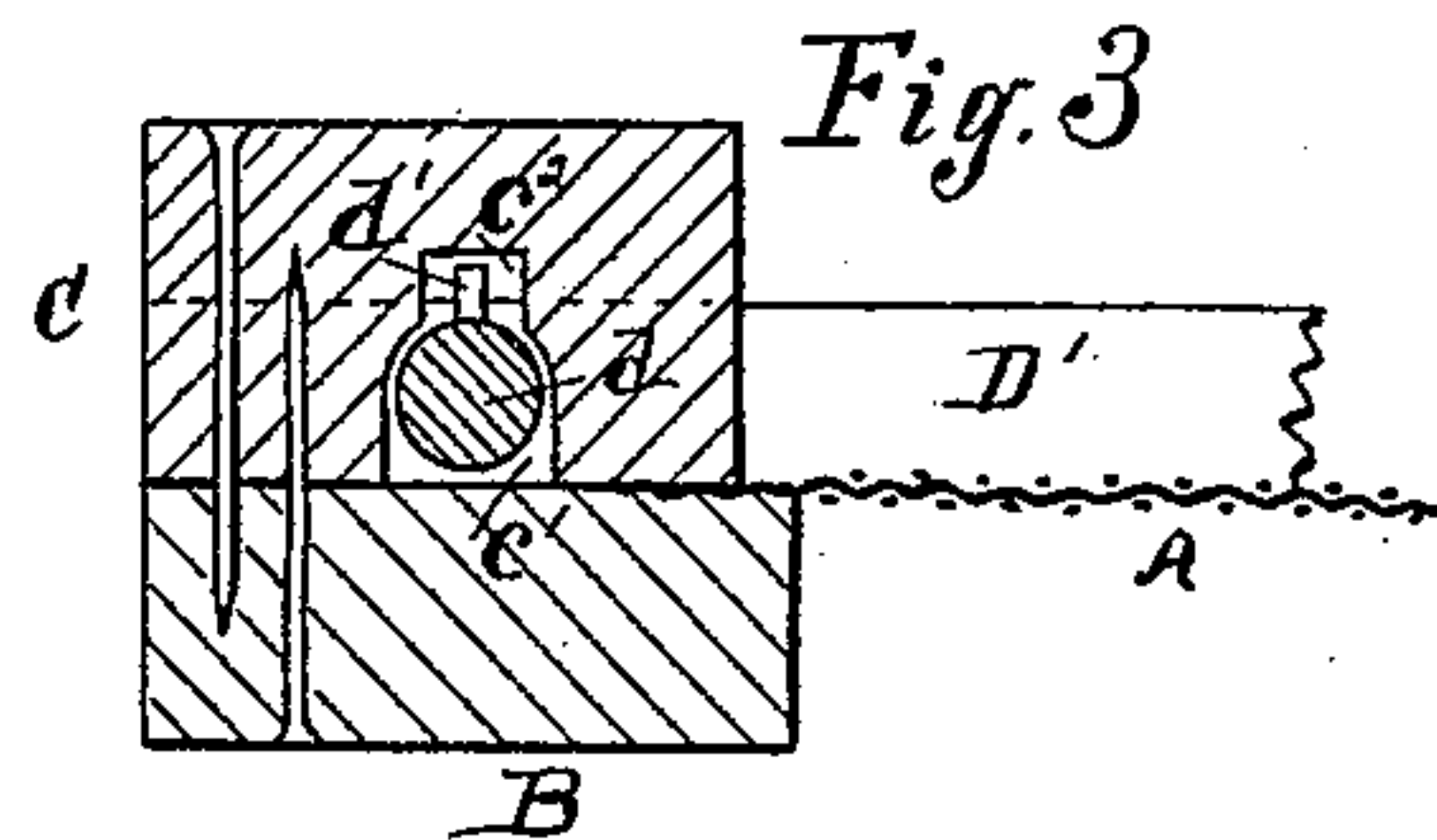
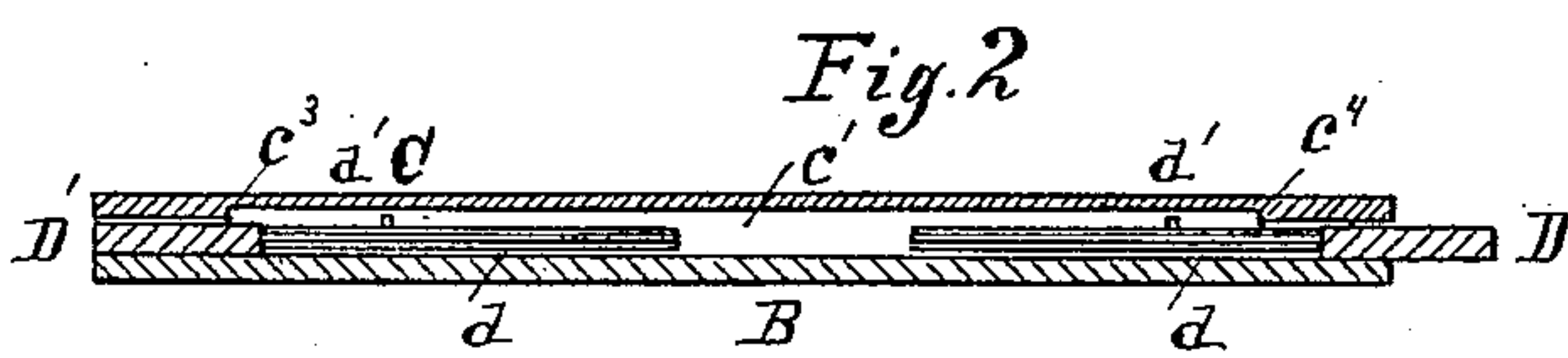
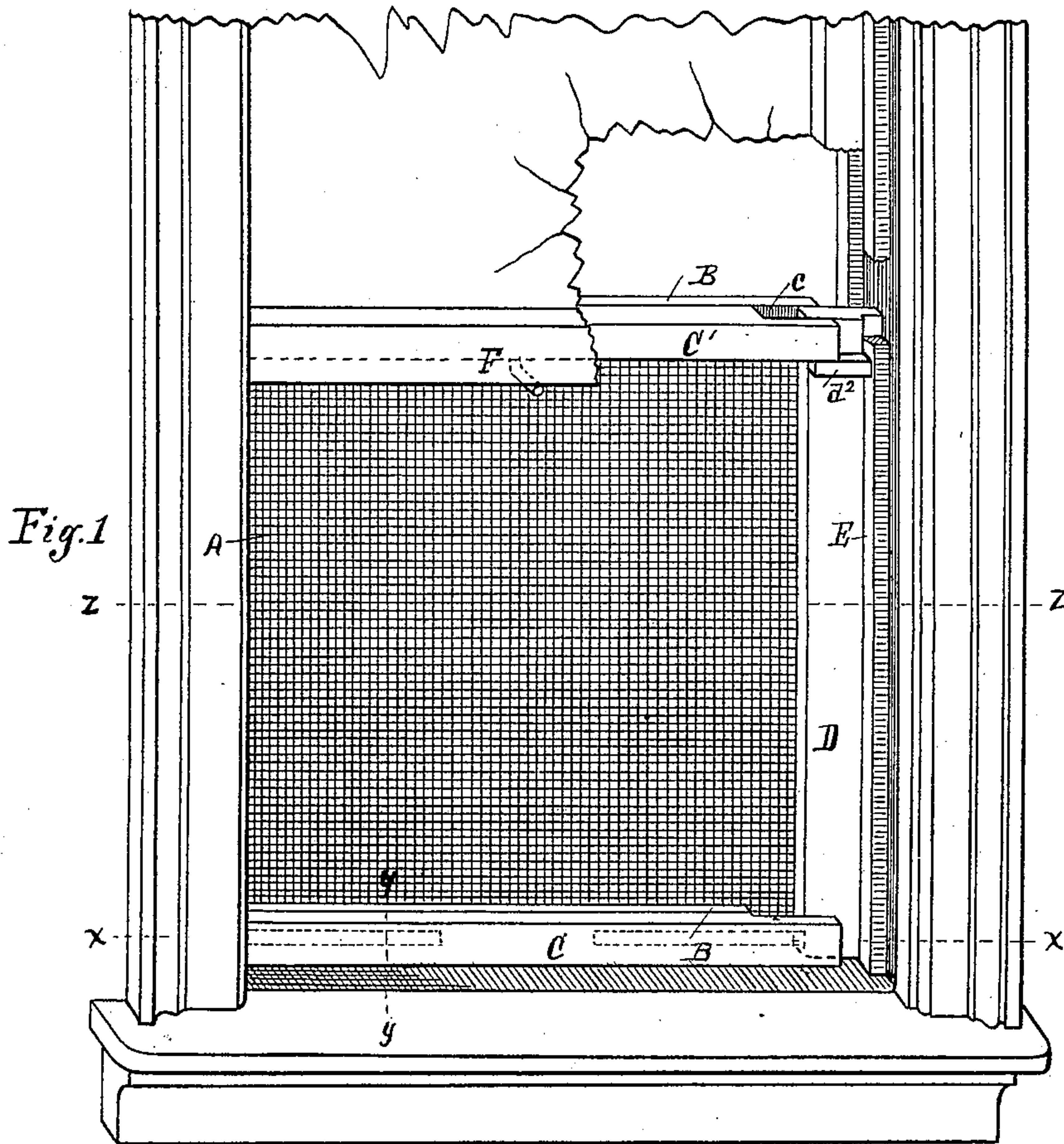


(No Model.)

T. W. DOWLING.
WINDOW SCREEN.

No. 390,117.

Patented Sept. 25, 1888.



Witnesses:
Alfred M. Low
George H. Higg

Inventor:
Thomas W. Dowling
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Att'y

UNITED STATES PATENT OFFICE.

THOMAS W. DOWLING, OF DETROIT, MICHIGAN.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 390,117, dated September 25, 1888.

Application filed March 19, 1888. Serial No. 267,650. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. DOWLING, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Window-Screens; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in the construction of window-screens, and more particularly of adjustable screens, the design being to provide an article of this class which shall be economical in construction, easily operative, and which will be more satisfactory and efficient than window-screens of this nature heretofore constructed.

In the accompanying drawings, Figure 1 is a view in perspective illustrating my invention located in place in a window-frame. Fig. 2 is a section along the line $x x$ of the screen. Fig. 3 is an enlarged view showing details of construction and in section along $y y$; Fig. 4, a section along the line $z z$, showing one of the wings extended.

I carry out my invention as follows:

A represents the screen fabric engaged upon an ordinary four-sided frame, B, in the usual manner, this frame B extending around the entire margin of the fabric. Upon two sides of said frame I engage caps C C', recessed at each extremity, as shown at c , and formed with the longitudinal groove c' , which may, for convenience, extend across the entire face of the cap. Intermediate its ends the groove itself may be constructed with a deepened channel, as at c^2 , the extremities thereof affording stops $c^3 c^4$.

D and D' represent movable wings of the frame, each provided at its extremities with spindles d , the spindles engaging in the grooves c' , and being so located as to be reciprocatory, in order to adjust the wings D D' at opposite edges of the frame to make the screen fit any desired window. These wings are limited in

their inward movement by the recessed portion of the caps C C'. To limit their opposite movement, so that they will not pull out of the frame, I engage in the spindles, as at d' , a stud to extend into the deepened portion of the groove, and which, striking against the stops at c^3 or c^4 , as the case may be, will prevent the further movement of the wings outward.

The operation of the device will be understood. The screen is located in the window and the wings adjusted as desired. A screen so made will readily fit windows of various sizes, and may be constructed in quantities as articles of manufacture. The wings being adjustable at the edges of the main frame B, upon which the fabric is engaged, there are no cross-bars or anything of that nature to obscure the face of the fabric. The screen is readily put in place and removed. Where it is desired to locate the screen underneath the upper sash and on the exterior of the lower sash, so that its removal will not be required to close the lower sash, I add to the wings at their upper ends a bracket, d^2 , of a thickness suitable to occupy and properly close the space between the face of the wing and the inner edge of the parting-strip E, thereby protecting the window at this point when the wings are drawn out, so that their outer edges are extended beyond the edges of the caps C or C'. In this case, also, where the screen is located on the outside the lower sash, a movable arm, F, may be engaged with the screen to support the lower sash or to be turned out of the way, as may be desired.

It will be understood that the spindles d and the corresponding grooves in the caps may be square or annular or of any desired form.

A screen thus constructed with the bracket is adapted to be placed either under or outside the lower sash, as may be preferred.

What I claim is—

The combination, with a four-sided frame and the fabric thereto attached, of adjustable wings located upon two sides of said frame, each having at its respective ends a spindle provided with a stud, and caps engaged upon

the other two sides of said frame, said caps
each provided with a longitudinal groove on
its inner face open at both ends to receive
the said spindles, and each further provided
5 with a longitudinal recess communicating with
the groove and stopping short of the ends of
the groove to receive and retain the stud on
the spindle, substantially as set forth.

Intestimony whereof I sign this specification
in the presence of two witnesses.

THOMAS W. DOWLING.

Witnesses:

N. S. WRIGHT,
GEORGE H. HIGGS.