

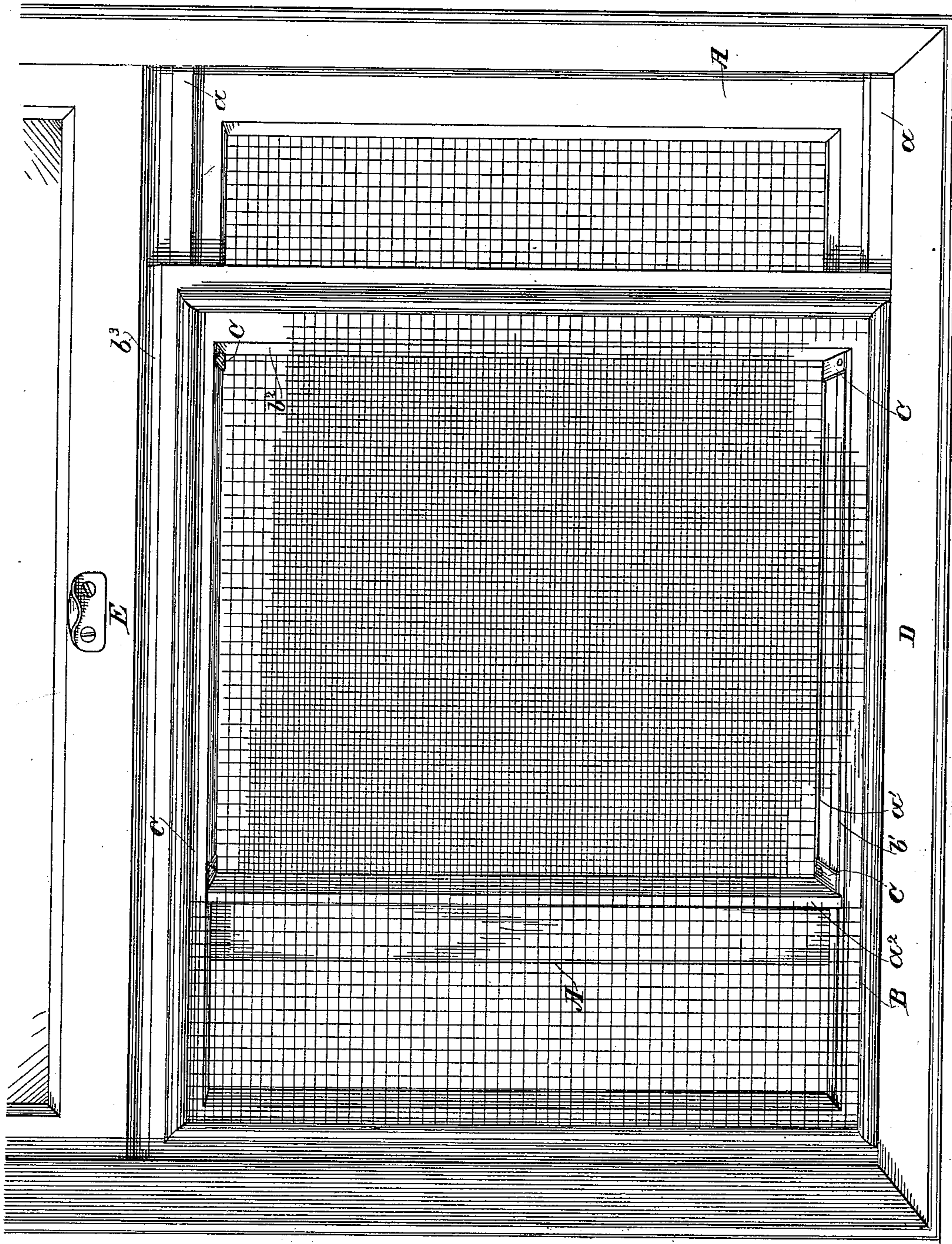
(No Model.)

2 Sheets—Sheet 1.

O. G. NIEHAUS.
WINDOW SCREEN.

No. 566,929.

Patented Sept. 1, 1896.



Witnesses,
J. H. Morse
H. F. Aschbeck

Fig. 1.

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Fig. 2

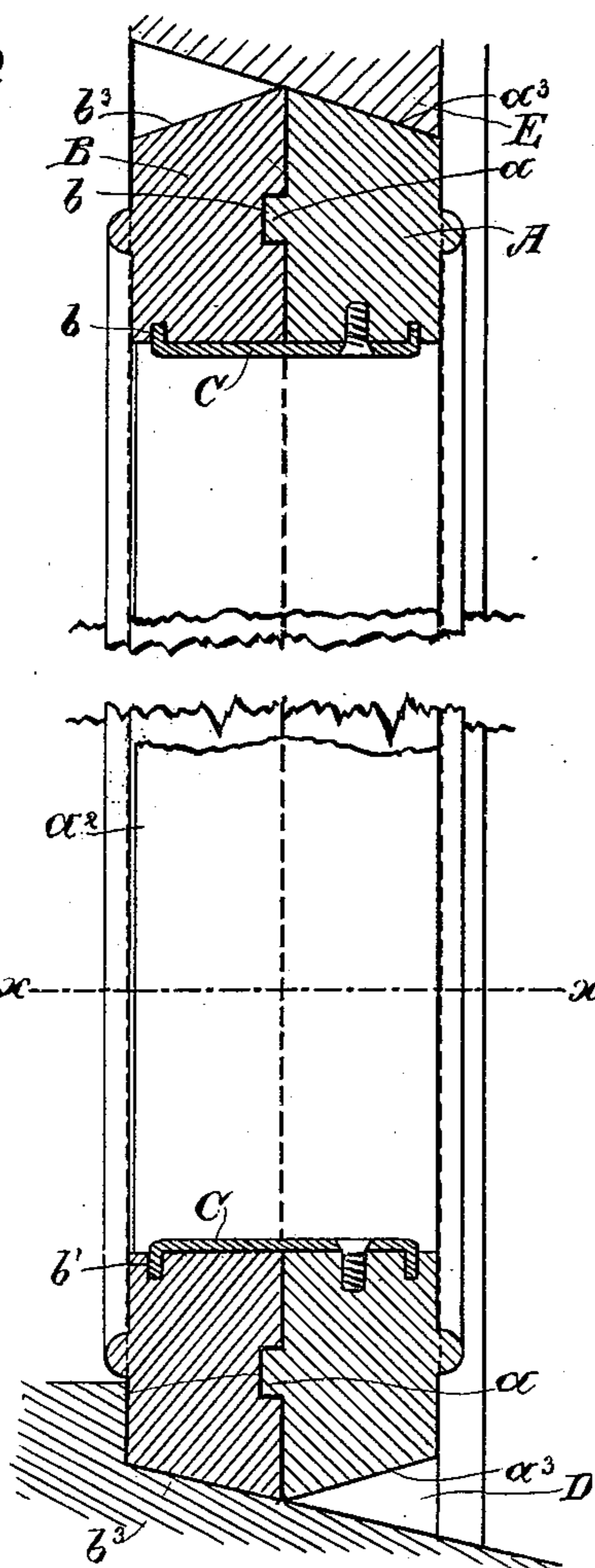
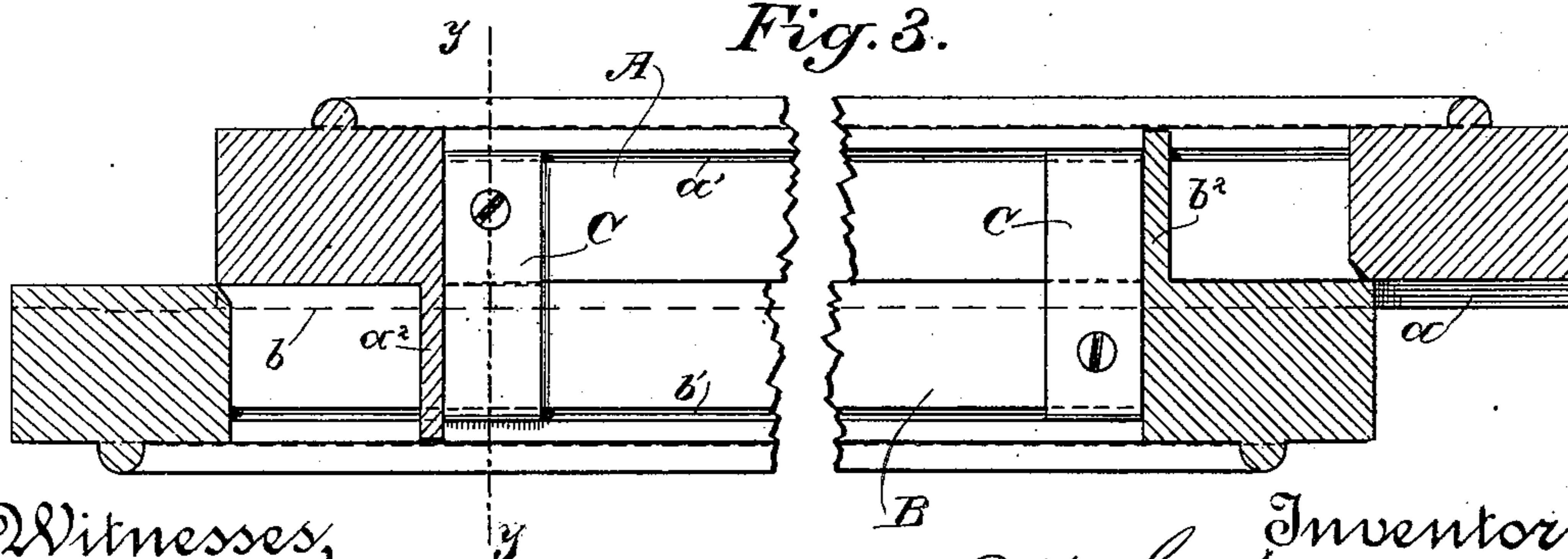


Fig. 3.



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UNITED STATES PATENT OFFICE.

OTTO G. NIEHAUS, OF WEST BERKELEY, CALIFORNIA.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 566,929, dated September 1, 1896.

Application filed May 11, 1896. Serial No. 591,003. (No model.)

To all whom it may concern:

Be it known that I, OTTO G. NIEHAUS, a citizen of the United States, residing at West Berkeley, county of Alameda, State of California, have invented an Improvement in Window-Screens; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of window-screens in which the screen is composed of intersliding sections, whereby it may be adjusted in length to be inserted in and fit the aperture or space of the window-casing, and to form a proper joint between the sill on which it rests and the lower rail of the sash, which is drawn down upon its top.

My invention consists in the novel construction and arrangement of the guides by which the two sections are fitted together and are enabled to be extended and contracted; in the stops at one end of each section, by means of which the two sections, when closed, are not only limited, but when opened, either fully or partially, are so protected between their screen-surfaces as to form a fly-tight joint, and, finally, in the double bevel given to the upper and lower sides of both screens, all of which I shall hereinafter describe, together with the objects of the improvements.

Referring to the accompanying drawings, Figure 1 is a perspective view of my screen, showing it in the window. Fig. 2 is a vertical section on the line $y y$ of Fig. 3. Fig. 3 is a horizontal section on the line $x x$ of Fig. 2.

A is one of the sections, and B is the other section, of the screen. These sections are made, as usual, of wooden frames covered with wire-netting. They are fitted and adapted to slide one upon the other by means of tongues a on the top and bottom of section A, fitting in corresponding grooves b in the top and bottom of section B. These slides are further supplemented and the two sections held perfectly together in their sliding movement by means of the metallic clamps or straps C. There is one of these clamps or straps located and secured rigidly near the inner corner or angle, top and bottom, of one end of the section A, and one secured in corresponding positions at the opposite end of

the section B. The former clamps or straps overlap the section B, and their ends are bent downwardly and play freely in guide slits or grooves b' in section B, while the latter overlap section A, and their ends are bent downwardly and play freely in slits or grooves in said section A. Thus two of said clamps or straps are secured to one section and play in grooves in the other, and the other two are secured to the other section and play in grooves in the first. There are thus four of these clamps or straps, which may be said to be located at the corners of the combined screen, and they hold the two sections firmly together and permit their sliding movement with accuracy and precision, so that said sections will not tend to loosen or work away from each other, as in ordinary forms of screens, but will remain together and slide true, no matter how long the screen may be in use. These clamps or straps, together with the tongues and grooves, form the means by which the two sections are held together and are rendered intersliding.

The inner or adjacent ends of the two sections are made very wide, as shown at a^2 and b^2 , said width being sufficient to cause the edges of said ends to approach very closely each to the wire-screen surface of the other and to form therewith a tight enough joint to prevent the passage of insects. Therefore when the screen is either wholly or partially extended the space between the two screen-surfaces is traversed by these wide ends, and what would otherwise be a passage around either end from one side of the screen to the other is cut off and obstructed, so that the flies cannot enter. These wide ends may be formed as extensions of reduced thickness of the inner ends or walls of the sections, so as to provide a recess back of them for the frame-bars of the other section, whereby, when the sections are closed, their outer ends are substantially flush and closely nested. These wide ends also serve on their outer surfaces as stops by coming in contact with the other ends of the sections when the two are closed together, so that the two sections abut neatly and perfectly when in a closed position.

The top and bottom of both sections are beveled, as shown at a^3 and b^3 , adjacent bev-

els being in opposite directions. This is for the purpose of enabling the screen to fit down neatly and closely upon the sill D of the window and to receive the close contact of the lower rail E of the window-sash in whatever position the screen may be placed, either end for end or top for bottom.

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

1. In a window-screen, composed of inter-sliding sections, clamps or straps secured rigidly to one of said sections, one above and one below, near the inner corner of one of its ends, each of said straps overlapping the other section and having a downturned end sliding in a groove or slit in said section, and clamps or straps secured rigidly to said other section, one above and one below, near the inner corner of its ends, and overlapping the first-named section and having downturned ends sliding in grooves or slits in said first-named section.

2. In a window-screen, composed of inter-sliding sections, clamps or straps secured rigidly to one of said sections, one above and one below, near the inner angle or corner of one of its ends, each of said straps overlapping the other section and having a downturned end sliding in a groove or slit in said section, clamps or straps secured rigidly to said other section, one above and one below at its opposite inner angle or corner, and overlapping the first-named section and having downturned ends sliding in grooves or slits in said first-named section, and tongues on the top and bottom of one of said sections and grooves in the top and bottom of the

other section with which said tongues engage.

3. In a window-screen composed of inter-sliding sections, the wide adjacent or inner ends of said sections, reaching across the space between the screen-surfaces thereof and forming insect-tight joints therewith, said ends forming, with the end of their own section, substantially a recess for the end bar of the opposing section and also serving as stops when the sections are closed.

4. In a window-screen, composed of inter-sliding sections, the wide adjacent or inner end extensions of said sections reaching across the space between the screen-surfaces thereof and forming insect-tight joints therewith, said ends serving as stops when the sections are closed, the clamps or straps secured at opposite ends to the inner angles or corners of said sections as described, and overlapping and sliding in grooves in the section opposite to that to which they are secured, and grooves in one section and tongues in the other fitting in said grooves.

5. A window-screen composed of intersliding sections having tongues in one and grooves in the other, and oppositely-secured clamps or straps at their corners sliding in grooves or slits in opposite sections, said sections having their adjacent ends made wide to traverse the space between the screen-surfaces and their tops and bottoms oppositely beveled.

In witness whereof I have hereunto set my hand.

OTTO G. NIEHAUS.

Witnesses:

GEORGE SCHMIDT,
LOUIS GULLIXSON.