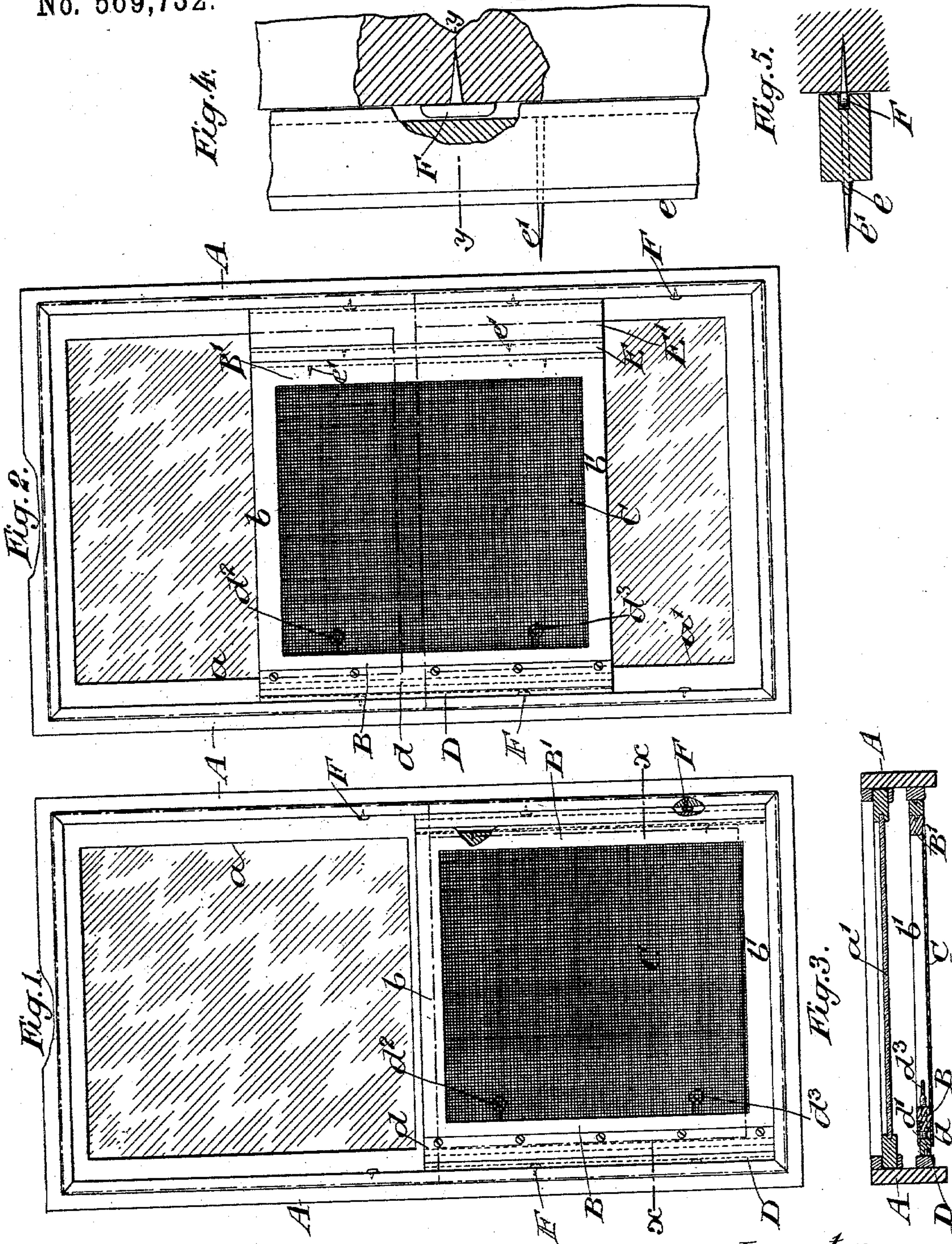


(No Model.)

C. C. WHEELER.
WINDOW SCREEN.

No. 569,732.

Patented Oct. 20, 1896.



Witnesses:-
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UNITED STATES PATENT OFFICE.

CHARLES COOK WHEELER, OF HOLLAND, MICHIGAN.

WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 569,732, dated October 20, 1896.

Application filed October 22, 1895. Serial No. 566,469. (No model.)

To all whom it may concern:

Be it known that I, CHARLES COOK WHEELER, of Holland, in the county of Ottawa and State of Michigan, have invented a new and useful Improvement in Window-Screens, of which the following is a specification.

My invention relates to an improvement in window-screens in which provision is made for adapting the screen to different widths of windows, in which the variation of widths is greater than can be conveniently accommodated by the adjustable section heretofore in use.

In Letters Patent, dated December 19, 1894, No. 511,106, I showed, described, and claimed a window-screen provided along its side with an adjustable section under the control of thumb-screws and so arranged as to form an insect-tight joint with the window frame and sash, and in Letters Patent No. 533,187, granted to me on January 29, 1895, I showed, described, and claimed a screen embodying the adjustable section referred to in my former patent, and in addition thereto means for fitting the screen to openings of different heights and providing for the passage of the hand through the screen-frame to manipulate the outside shutters without disturbing the screen.

My present invention contemplates the provision of addition-strips fitted to the edge of the screen opposite the adjustable section for the purpose of adapting the screen to the varying sizes of windows which approximate certain predominating sizes, which, for purposes of supplying the market in an economical manner, may be termed "standard sizes"—for example, the predominating sizes, found to be twenty-four, twenty-eight, thirty-two, and thirty-six inches. It is my purpose to provide means for adapting made-up screens of these several standard sizes to fit the varying unusual sizes which group around several standard sizes and yet which vary therefrom more than it has been feasible to account for by the simple adjustment of the adjusting section referred to in my former patents.

My invention further contemplates the provision of certain guides in the form of narrow-headed pins, staples, or the like set at intervals in the window-frame to permit the ready adjustment and removal of the screen and at

the same time admit of making the groove in the exterior faces of the screen of lesser width and less liable to bind upon the guides under the influence of the weather.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of a window-frame in front elevation, showing the screen adjusted therein, its frame being partially broken away to indicate the attachment of the addition-strip and the location of the guide pins or staples more clearly. Fig. 2 is a similar view showing the screen partially raised and two addition-strips instead of one, as shown in Fig. 1. Fig. 3 is a transverse section through line $x x$ of Fig. 1. Fig. 4 is an enlarged view in detail of a portion of the window-frame and of an addition-strip adjacent thereto, a part being broken away to show the location of the guide pin or staple; and Fig. 5 is a transverse section through Fig. 4, taken along the line $y y$.

The window-casing is denoted by A, the upper sash by a , and the lower sash by a' .

The screen-frame consists of a permanently-joined rectangular frame, the sides of which are denoted by B B' and the top and bottom by $b b'$, respectively. A fine network of metallic or other suitable gauze (denoted by C) is permanently secured to the said frame. At one side, in the present instance the left-hand side as the drawings are held, the permanent screen-frame is provided with an adjustable section, (denoted by D,) (see Fig. 3,) which is received between thin flanges $d d'$, permanently fixed to the side B of the permanent frame and moved toward and away from the window-casing by means of thumb-screws $d^2 d^3$. The frame as thus constructed may be adjusted to the window for which it is made by turning the screws $d^2 d^3$ so as to press the adjustable section D and the opposite side B' of the frame into snug contact with the opposite faces of the window-casing, as fully set forth in my former patents referred to. In order, however, to adapt it to widths of windows which vary to a greater extent from the size for which the screen, with its permanent frame and adjustable section, is intended, I provide addition-strips, one or more in number, two being shown in the

present instance, (denoted, respectively, by E and E'.) The strip E is in practice made one-half inch wide and the strip E' an inch wide. To these may be added, if the demands require it, a third strip an inch and a half wide, and this number of strips will be amply sufficient for all practical purposes to fit the screen to any of the varying widths which approximate to one of the standard sizes. These strips E E' are provided along one edge with a tongue *e*, adapted to fit within the groove in the side B' of the permanent screen-frame and are of a length corresponding to that side of the frame, and to hold them in their position to slide together with the frame I secure them to the frame by some suitable fastening devices, either a common nail, screw, or dowel-pin *e'*, which may be made to project from the edge of the tongue and enter a corresponding hole at the bottom of the groove in the edge of the screen-frame.

The outer edge of the addition-strip is provided with a groove corresponding to the groove in the outer edge of the permanent screen-frame, so as to fit the guides in the same manner that the permanent screen itself would fit them. If a second addition-strip be required, it may be applied to the previous addition-strip in the same manner that that strip was applied to the permanent screen-frame, and in this manner the side of the screen-frame opposite that on which the adjustable section is located may be increased in width by half inches up to two inches or more.

The use of the first addition-strip will have a tendency to equalize the widths of the opposite sides of the screen-frame, so as to present no objectionable feature in the matter of making the sides out of proportion, but will rather have a tendency to bring the widths of the opposite sides into proportion.

These addition-strips may be kept in stock and applied to the different standard widths of screens, as the varying widths of windows may demand, so that a permanently made-up

screen may be rendered feasible for use in connection with all widths of windows in the place of the knockdown screen, and the screen when once fitted to the window may be varied from time to time to keep the joints closed, according as the window-casing is thrown slightly out of shape by the settling or shrinking of the parts.

The guide for holding the screen in position is formed by inserting pins or staples F at suitable intervals along the face of the casing or stops attached to the casing, and I prefer to make the heads of said pins or staples elongated and thin, as represented in Figs. 4 and 5, so that they will require a very narrow groove only in the outer edge of the frame. This admits of additional strength to the screen-frame, preventing the liability of splitting off the branches of the bifurcated edge, while the pins or staples, being of metal, will do away with the liability of their swelling and binding in the grooves in damp weather and will also overcome an objection which has heretofore been quite common—viz., the longitudinal twist which is liable to be given to the guide-tongue or screen-frame by warping under the action of the sun and weather.

What I claim is—

In combination, a screen-frame, an adjustable section secured on one side of the frame in position to be moved toward and away from the window-casing; an addition-strip secured to the opposite side of the frame, the said section and strip having narrow grooves extending along their outer faces, and guides secured to the casing and entering the said grooves in the adjustable section and addition-strip, said guides consisting of pins or staples having thin elongated heads to enable the use of very narrow grooves in the adjustable section and addition-strip, substantially as herein set forth.

CHARLES COOK WHEELER.

Witnesses:

GEO. E. KOLLEN,
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