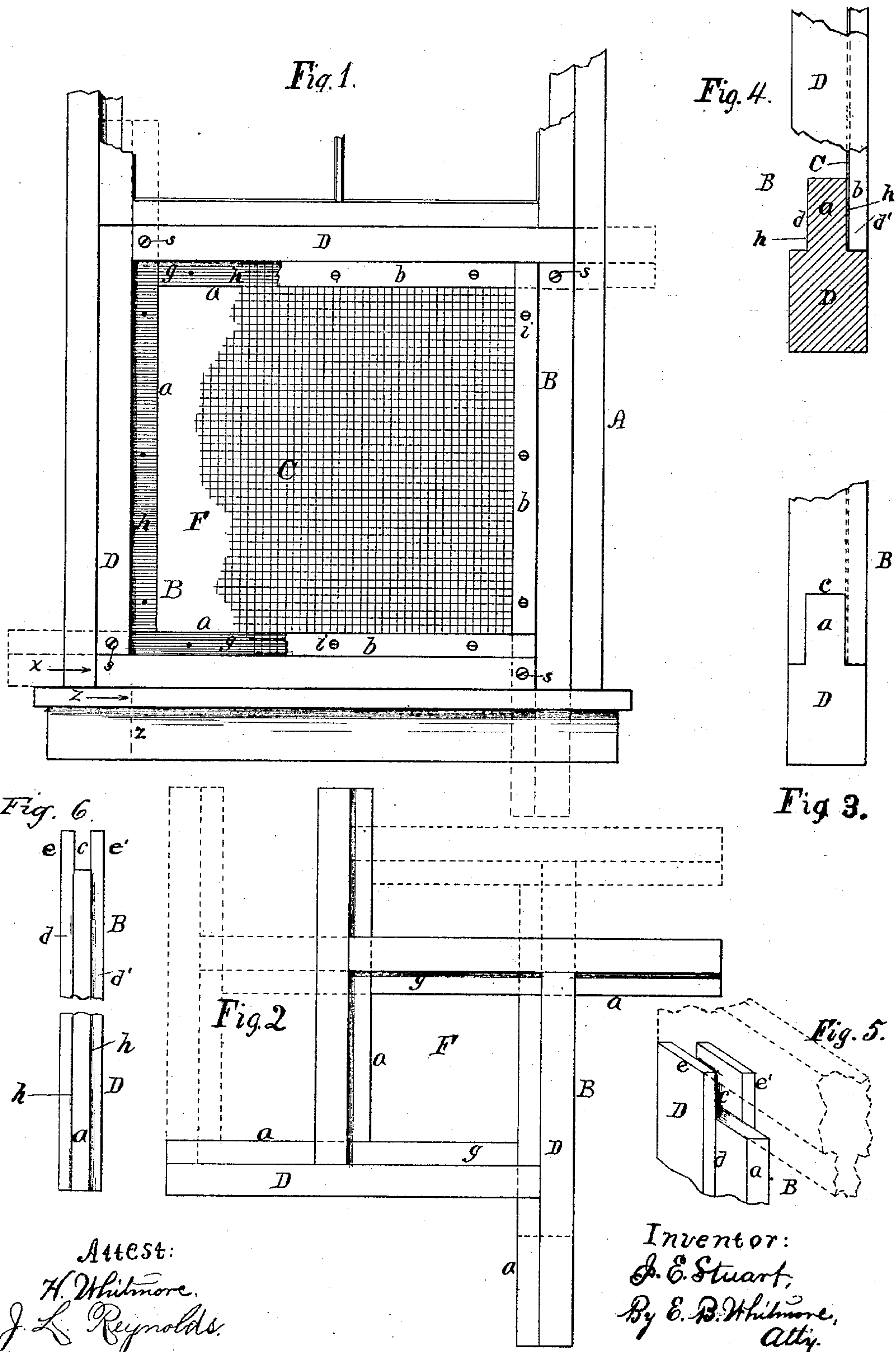


(No Model.)

J. E. STUART.
WINDOW SCREEN FRAME.

No. 328,080.

Patented Oct. 13, 1885.



UNITED STATES PATENT OFFICE.

JOHN E. STUART, OF NEWARK, NEW YORK.

WINDOW-SCREEN FRAME.

SPECIFICATION forming part of Letters Patent No. 328,080, dated October 13, 1885.

Application filed July 10, 1885. Serial No. 171,206. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. STUART, of Newark, in the county of Wayne and State of New York, have invented a new and useful Improvement in Window-Screen Frames, which improvement is fully set forth in the following specification, and shown in the accompanying drawings.

The object of my invention is to produce a frame for a window or door screen in which each of the four sides of the same is made of a single stick or strip of wood, and so formed and joined as to be capable of being moved or adjusted upon each other, so as to fit any rectangular opening, as the interior of a window or door frame of a building, whether large or small, within certain limits, and also without regard to the proportion between the length and width of the same—that is to say, the four sticks constituting the frame are shaped and joined so they may be adjusted to correspond to any possible rectangular parallelogram within certain limits as to size.

Referring to the drawings, Figure 1 is a side elevation of my improved screen-frame, showing the same fitted within the casing of a window in the place of the lower sash thereof, a part of the wire screen being broken away to better show the depressed part of the frame forming the seat for the wire screen or netting, a part of the strips holding the latter in place being also broken away; Fig. 2, a view of the frame without the wire screen and strips or holders for the screen, drawn to show, by means of full and dotted lines, the manner in which the sides of the frame may be moved or adjusted upon each other to form a frame of any size and proportions; Fig. 3, a view taken at the edge of the frame, as indicated by arrow *x* in Fig. 1, showing the end, drawn to a larger scale, of one of the bars or sides of the frame, and a portion of the adjacent side as it fits thereon; Fig. 4, a view of the parts from the same direction, the lower bar being transversely sectioned, as on the dotted line *z* in Fig. 1, the adjacent side of the frame being broken away to uncover the edge of the wire screen and the holders for the same; Fig. 5, a perspective view of the mortised or slotted end of one of the sides of the frame, showing the same more

fully, a portion of the adjacent bar or side being shown in dotted lines; and Fig. 6 a view of the inner edge of the side piece or bar of the frame drawn to show more fully the relation between the tongue and slot of the same.

Referring to the parts, A is a window-frame of ordinary construction; B, my improved screen-frame; C, the wire screen thereof, and *b* strips of wood constituting holders for said screen. The side pieces, D, of the screen-frame are prismatic bars, rectangular in cross-section, with similar rabbets, *d d'*, formed at adjacent corners thereof, leaving reduced longitudinal parts or tongues *a* extending along one side thereof. At one end of each side piece or bar there is formed a rectangular slot or groove, *c*, in line with the tongue, having parallel side parts or walls, *e e'*, the width of the slot being equal to the thickness of the tongues, and the depth, taken longitudinally of the slot, corresponding to the width of the tongue, so that when the slotted end of a bar is joined to the tongue of another bar, the two bars occupying positions at right angles to each other, the tongue will just snugly fill the slot, as shown in Fig. 3. Each piece being thus formed, the whole may be put together to form a rectangular frame with a rectangular opening, F, within, as shown in Fig. 2, the sides of the bars at either side of the frame, when formed, being even and in the same plane.

The rabbets or depressions *d d'* formed in the bars of the frame are rectangular, so that the plane of either face *h h'* of the tongue is parallel with the adjacent side of the body of the bar, and the planes of said faces of the tongues are the same as the respective planes of the sides of the adjacent grooves or slots. The ends of the tongue are at right angles with the three longitudinal faces thereof, and the plane of the end of each tongue adjacent to the slot is identical with the plane at the bottom of said slot, so that when put together, as stated, the outer edge of the tongue of each bar rests squarely against the end of the tongue of the contiguous bar, and against the bottom of the slot thereof.

From viewing Fig. 2 it will be seen that by sliding the parts upon each other one way or the other the exterior of the frame may be made to coincide with the outline of any

square or rectangular figure longer one way than the other, which greatly facilitates the work of fitting the screen-frame to any given window or door frame, the overhanging ends 5 of the bars being cut off with a saw after the frame is brought to the size of the window-frame in which it is to be inserted.

After the screen-frame is fitted to the window-frame or door-frame, as mentioned above, 10 the wire-cloth is cut to fit the interior of the screen-frame, it lying, when put to place, against the faces *h* of the four inward-turned tongues of the bars, and held to place by parallel strips of wood *d*, which are secured by 5 any simple means—as, for instance, button-headed screws *i*. The wire cloth or screen is designed to be placed in the depression *g*, formed in the frame by the rabbets *d'* of the 10 combined bars, and in the side of the frame turned toward the interior of the room.

At the corners the screen-frame may be secured by nails or screws *s*, as shown. In manufacturing the bars for these frames and the holders for the screens, I make them of lengths 5 for large-size windows or doors, as the case may be, and put them up in bundles for the market. In fitting them to the window or door frames they are adjusted to the size required, secured at the corners, and the projecting 10 ends cut off, as above stated.

The holders *b* for the screen are preferably made in width equal to the width of the tongues of the bars, and of such thickness as to have their outer surfaces even with the surfaces 5 of the body portions of the bars, which adds to the evenness and symmetry of the frame.

Screen-frames for doors and windows, consisting of bars joined, having longitudinal 10 tongues along one side thereof, were made before the date of my present invention; also door-frames having depressions in the inner edges of the four pieces (stiles and rails) surrounding an opening, in which to receive a panel of wood 5 or wire-cloth, are not new, and are here dis-

claimed. The bars of my improved screen-frame are all alike, and each formed with a longitudinal tongue along the middle of one face thereof. In addition thereto each bar has also a transverse groove or opening at one 50 end corresponding in dimensions to the dimensions of said tongue, excepting as to length. By joining these bars, as shown and above described, the rectangular frame thus formed may be reduced to inclose any size of opening 55 down to nothing, or adjusted to form rectangular openings of any desired proportion between their lengths and breadths. This cannot be accomplished as readily by screen-frames heretofore produced. 60

What I claim as my invention is—

1. A frame made up of side pieces or bars, D, joined, as shown, each bar being formed with a longitudinal tongue, *a*, at one side thereof, and a slot, *c*, at one end of the bar in 65 line with the tongue, the slots of each bar being of a size to receive and be filled by the tongue of the contiguous bar, substantially as described, and for the purpose set forth.

2. A screen-frame composed of side pieces 70 or bars, D, joined, as shown, each bar being formed with longitudinal depressions or rabbets *d d'* and tongue *a* at one side thereof, and a slot, *c*, at the end of the bar in line with the tongue, the slots of each bar being of a size 75 to receive and be filled by the tongue of the contiguous bar, the frame having an inner depression, *g*, in which to receive the wire cloth or screen, substantially as shown.

3. The combination, in window-screen 80 frames, of the screen-holders *b*, the screen C, and frame B, the latter being composed of bars D, each provided with a longitudinal tongue, *a*, and slot *c*, substantially as shown and described. 85

JOHN E. STUART.

Witnesses:

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J. L. REYNOLDS.