

(No Model.)

F. J. RICE.
WINDOW SASH.

No. 462,932.

Patented Nov. 10, 1891.

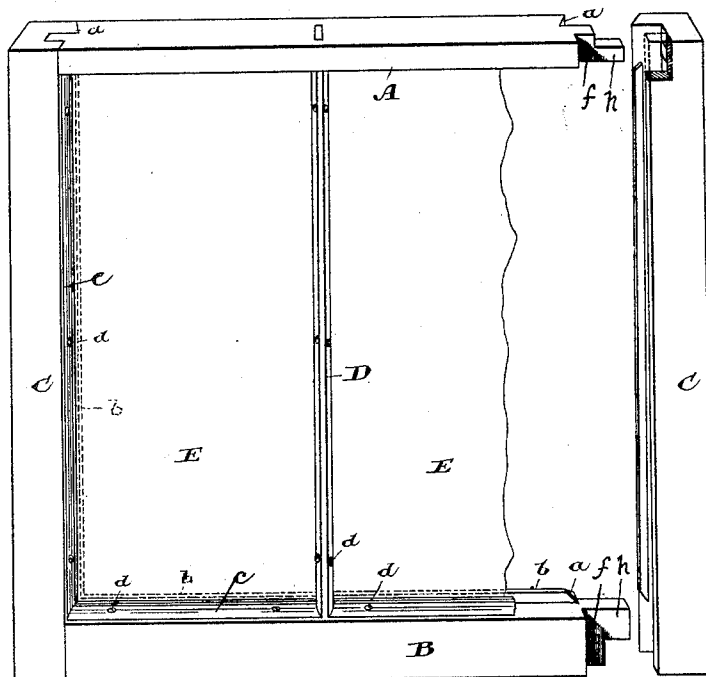


Fig. 1.

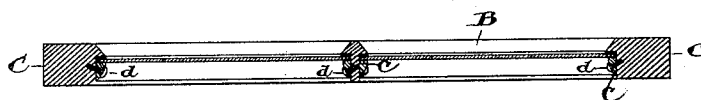


Fig. 2.

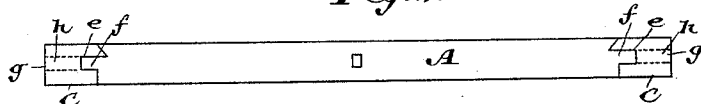


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERICK JAMES RICE, OF TORONTO, CANADA.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 462,932, dated November 10, 1891.

Application filed March 9, 1891. Serial No. 384,240. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK JAMES RICE, carpenter, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Window-Sashes, of which the following is a specification.

The object of the invention is to design a window-sash in which the pane of glass may be held firmly in position in a perfectly water-tight manner, and yet if broken be capable of quick and ready removal from the inside of the window without removing the sash; and it consists, essentially, of forming the stiles, rails, and bars with a beveled abutting projection on the outside of the window, and providing rubber strips which are attached to or placed next to the inner side of the abutting piece and form a compressible seat against which the pane is forced and held on all sides by separate inner strips for each side, which are secured in position, preferably, by screws. I have also improved the manner of connecting the top and bottom rails of the sash to the stiles, as hereinafter more particularly explained.

Figure 1 is a perspective view showing one of the stiles removed. Fig. 2 is a cross-section. Fig. 3 is a top plan.

In the drawings like letters indicate corresponding parts.

A is the top rail of the sash; B, the bottom; C, the stiles, and D the bar. The rails A and B, stiles C, and bar D have beveled abutting projections *a* formed on them on the outside of the sash, against which projections are placed the rubber strips *b*. The window-pane E is secured in position by separate strips *c* on the inside of the pane and sash. The strips *c* are secured in position by screws *d*, driven, preferably, obliquely into the rails, stiles, and bars, so as to force the pane at the edges tightly against the rubber strips *b*.

On reference to Fig. 1 it will be seen that I

show one of the stiles removed, so as to exhibit the method of putting the sash together. I cut a groove *e* in the stile C, so as to receive the tongue *f* in the top and bottom rails, and a mortise *g* outside the groove *e* in the stiles to receive the tenon *h*, formed outside the tongue. The tongues *f* extend to the top and bottom of the rails. If in this construction I joined the top and bottom rails to the stiles by the ordinary mortise and tenon, the top and bottom rails would frequently twist and loosen the strip *c*, thereby rendering the panes insecure at the top and bottom, and, as such, not water-tight; but by constructing the sash as above described I obviate all danger of twisting, and consequently secure on all sides of the pane a perfectly firm and water-tight job.

From this description it will be seen that I dispense with putty and provide a substitute much more durable and just as water-tight, and one by which the pane may be placed in position from the inside of the sash and without removing the same by unskilled labor far more quickly and with better results than under any other construction of which I am aware.

What I claim as my invention is—

In a window-sash, the combination of the stiles formed with the abutments, the rubber strip and the strips *d* to press against the pane and form water-tight joints, and the connection between the rails A B and the stiles to prevent spreading of the joints, said connection consisting of the tongues *f* on the rail, of the full depth thereof, adapted for insertion within recesses in the stiles, and the tenons projecting from the tongues entering mortises formed in the bottoms of the recesses, substantially as described.

FREDERICK JAMES RICE.

Witnesses:

A. B. MONKHOUSE,
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