

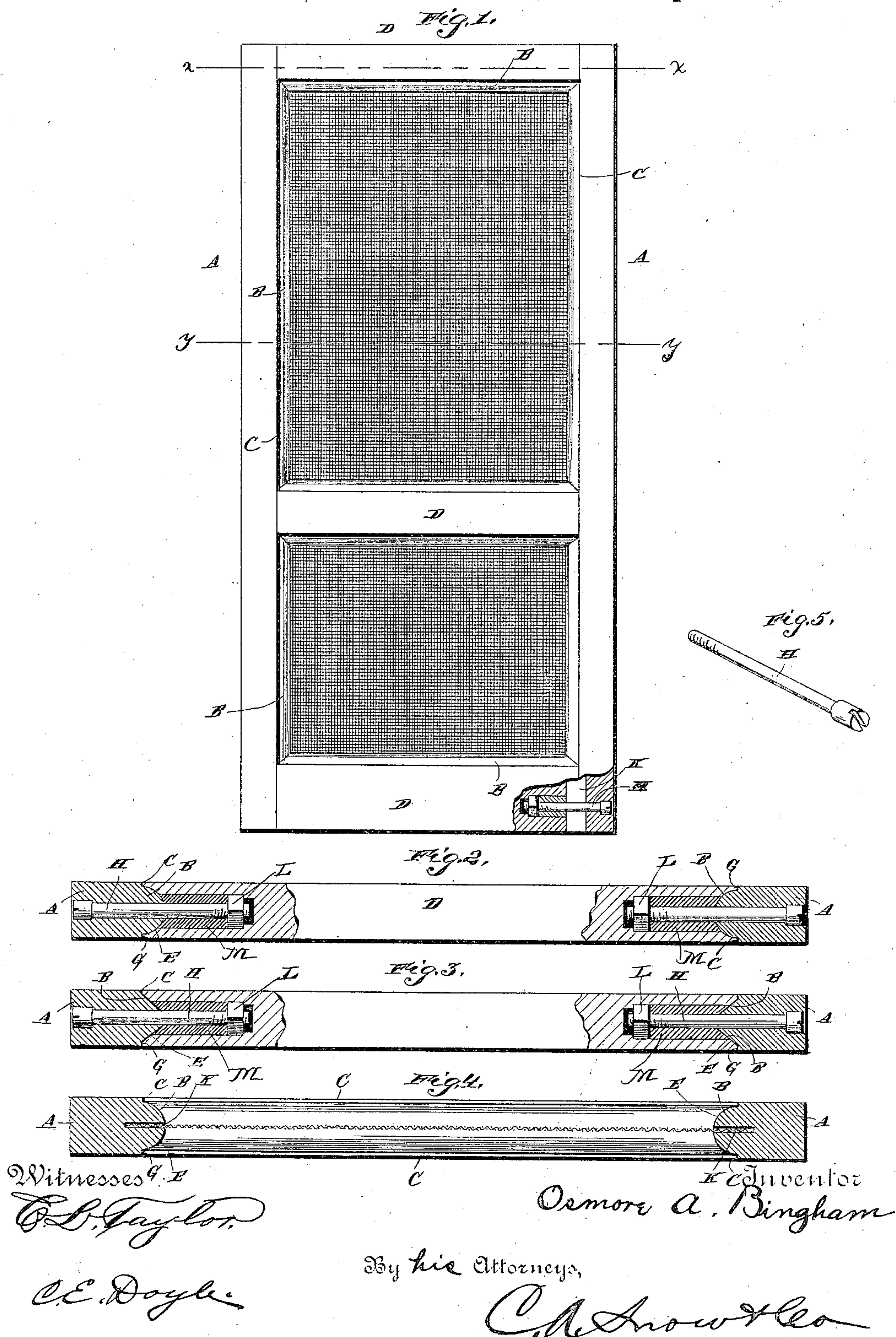
(No Model.)

O. A. BINGHAM.

FRAME FOR DOORS, WINDOWS, &c.

No. 369,581.

Patented Sept. 6, 1887.



UNITED STATES PATENT OFFICE.

OSMORE A. BINGHAM, OF KEENE, NEW HAMPSHIRE.

FRAME FOR DOORS, WINDOWS, &c.

SPECIFICATION forming part of Letters Patent No. 369,581, dated September 6, 1887.

Application filed March 12, 1887. Serial No. 230,675. (No model.)

To all whom it may concern:

Be it known that I, OSMORE A. BINGHAM, a citizen of the United States, residing at Keene, in the county of Cheshire and State of New Hampshire, have invented new and useful Improvements in Frames for Doors, Windows, &c., of which the following is a specification.

My invention relates to improvements in frames for doors, windows, &c.; and it consists in a certain novel construction, herein-after fully set forth and claimed.

In the accompanying drawings, Figure 1 is a front elevation of a screen-door embodying my improvements. Fig. 2 is a detail section on line *x x*, Fig. 1. Fig. 3 is a similar view of a modification. Fig. 4 is a section on the line *y y*, Fig. 1. Fig. 5 is a detail view of one of the bolts.

Referring by letter to the drawings, A A designate the side vertical pieces of the frame, having the inner edges formed with a curved or semicircular ridge or tongue, B, with a slight shoulder, C, on each side thereof.

D represents the cross-pieces, also formed on the inner edges with the ridge or tongue B, which, being thus carried entirely around the inner edges of the frame, serves as an ornamental molding. The ends of the said cross-pieces are grooved at the ends, as shown at E, to fit the tongues or ridges on the side pieces, and are also provided with a small abutting surface or edge, G, on each side of the groove to bear against the said shoulder C when the pieces are jointed together.

A bolt, H, having a screw-head, is passed through the side piece, A, from the outside, and screwed into the end of the cross-piece D, the nuts L, into which the said bolts fit, being placed in countersunk recesses in the ends of the cross-pieces, and secured therein by the longitudinally-apertured blocks M, placed in the recesses against the nuts.

It will be seen that when the members of the joints are placed in the proper relation to each other, and the bolts passed through the side pieces and screwed into their respective nuts in the ends of the cross-pieces, the said frame will be very tightly drawn together.

K is a small groove cut around the entire frame in the inner edges of the pieces to receive screening, glass, or panels, and it is ob-

vious that the said screening, glass, or other material must be put in place before the frame is drawn together; but after having been drawn together the said material is held in place without the use of tacks, glue, putty, or any other similar fastening.

Fig. 3 shows a modified form of the joint in which the tongue is beveled instead of being rounded, and there are a number of different forms which the joint may be made to assume to produce the desired result.

My improvement is to form a frame without the use of the mortise-and-tenon joints, and adapt it to be readily taken apart and put together, thus making it possible to do without the use of the usual forms of fastenings for the screen, glass, &c.

My frame can also be made lighter with the same amount of strength as the ordinary frame, as the narrow abutting edges on the ends of the cross-pieces bear against the shoulders on the side pieces and form a very rigid and immovable joint; also, in case the door, owing to heat or dampness, should be drawn or sprung out of shape, the tightening of the bolts will immediately return it to its normal shape; further, the door being formed with the simple and easily adjustable joint herein described, may be more cheaply manufactured than the ordinary door.

When the device is used as a screen-door, the groove in the inner edge to receive the said screen will be found a great improvement, as the screen is thus prevented from raveling and the appearance is also much better than by tacking on the outside of the frame.

My improved frame is adapted for use for window sashes or screens, and for panel glass, or screen doors, or for any purpose where a frame made up of separate pieces adapted to be readily and strongly jointed together is desirable.

Having described my invention, I claim—

1. As a new article of manufacture, a door or window screen frame comprising the side pieces, A, having the tongues B on their inner edges and the grooves K in the said tongues, the cross-pieces D, having similar grooved tongues B on their inner edges and having their ends recessed transversely to fit on the tongues B of the side pieces, the nuts firmly

secured in recesses in the ends of the cross-pieces, and the bolts H, extending transversely through the side pieces and engaging the nuts, and thereby clamping the side and
5 cross pieces together, substantially as described.

2. A door or widow screen frame comprising the side pieces, A, having the tongues B on their inner edges and the grooves K in the
10 said tongues to receive the edges of the screen or panel, the cross-pieces D, having similar grooved tongues B on their inner edges and having their ends recessed transversely to fit on the tongues B of the side pieces, the nuts
15 placed in recesses in the ends of the cross-

pieces, the longitudinally-apertured blocks M, placed in the recesses against the nut, and the bolts H, having screw-heads inserted transversely through the side pieces, A, through the blocks M, and engaging the nuts, thereby 20 clamping the several parts together, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

OSMORE A. BINGHAM.

Witnesses:

GEORGE P. LAWRENCE,
S. PROCTOR THAYER.