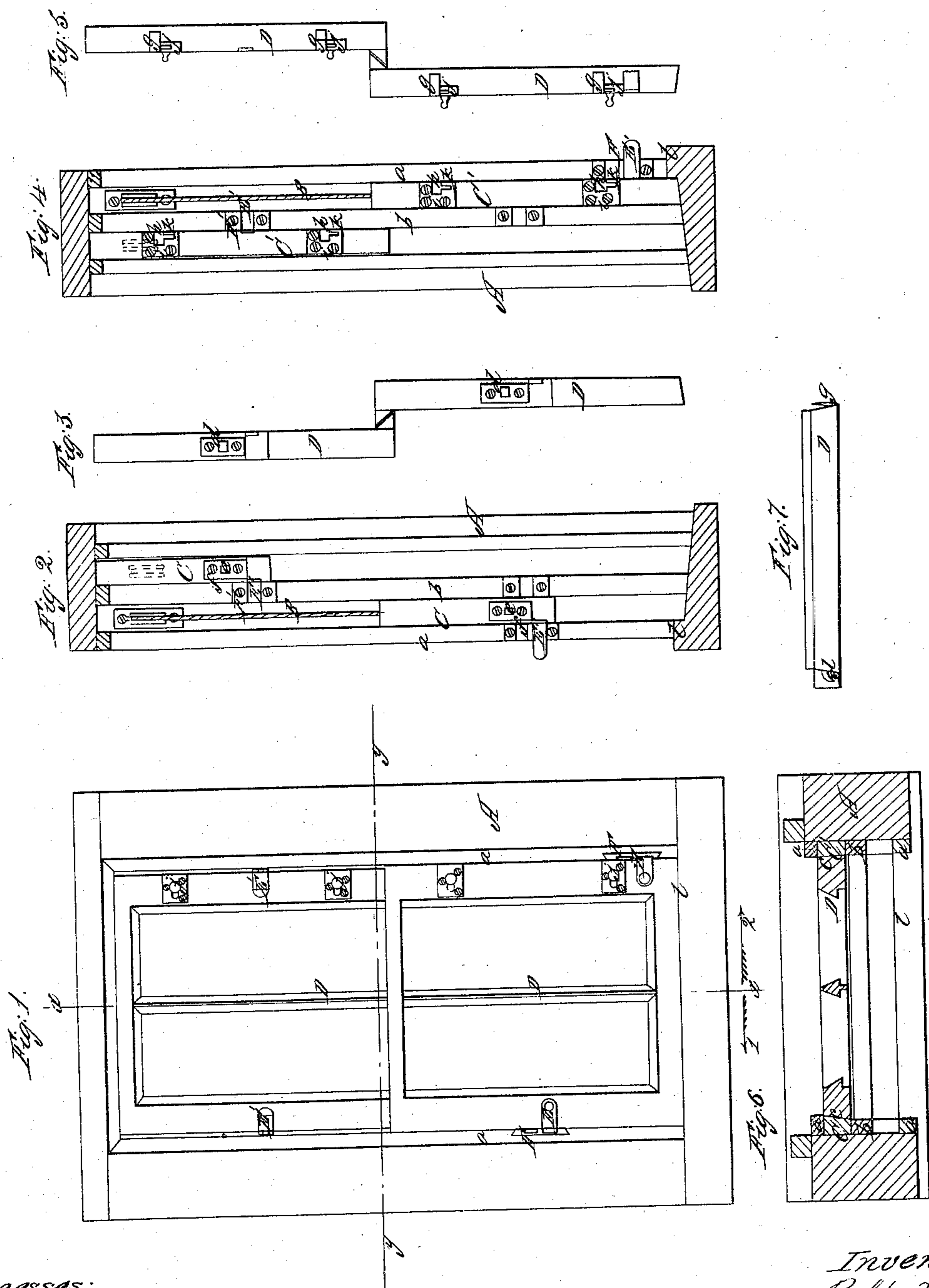


# R. Thomas. Window Sash.

N<sup>o</sup> 69,046.

Patented Sept. 17, 1867



Witnesses:  
H. A. Jackson  
W. H. Brown

Inventor:  
Robt. Thomas  
Per Munn & Co.  
Attorneys

# United States Patent Office.

ROBERT THOMAS, OF PARKERSBURG, WEST VIRGINIA.

*Letters Patent No. 69,046, dated September 17, 1867.*

## IMPROVED WINDOW-SASH.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ROBERT THOMAS, of Parkersburg, in the county of Wood, and State of West Virginia, have invented a new and useful Improvement in Window-Sashes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of a window, having the sashes fitted in it and arranged according to my invention.

Figure 2, a vertical section of the same, taken in the line  $x x$ , fig. 1, and looking in the direction indicated by arrow 1.

Figure 3, a vertical section of the same, also taken in the same line,  $x x$ , fig. 1, but looking in the opposite direction, indicated by arrow 2.

Figure 4, a detached side or edge view of the two sashes.

Figure 5 is also a detached side or edge view of the two sashes, opposite to the side or edge shown in fig. 4.

Figure 6 is a longitudinal section of the whole window, taken in the line  $y y$ , fig. 1.

Figure 7, a detached plan or top view of one of the sashes.

Similar letters of reference indicate like parts.

This invention has for its object the fitting of the sashes within the frame of the window in such a manner that the sashes may be removed from the window-frame and fitted therein with the greatest facility, and without removing or detaching stops, parting beads, and other parts pertaining to a window-frame, as is now necessarily required.

A represents the window-frame, which may be constructed in the usual manner, and provided with cords, B, having weights attached, which work within the frame in the ordinary way. The cords B, instead of being attached to the sashes directly, as hitherto, are attached to bars C C', which slide between the stops  $a$  and parting beads  $b$  of the window-frame. The bars C at one side of the frame are equal in length to one-half of the sash D, (see fig. 2,) while the bars C', at the opposite side of the frame A, are equal in length to the entire height of the sash, (see fig. 4.) The bars C C' are of such a thickness that their outer surfaces will be about "flush" with the outer surfaces of the stops and parting beads, and the outer surfaces of the bars C C' are slightly bevelled, as shown at  $c$ , in fig. 6, in order to facilitate the removal of the sashes from between the bars C C', as well as their adjustment between the sashes, the edges or sides of the sashes being bevelled in a similar manner. The sashes D D at one side have hooks,  $d$ , projecting from them, which fit into holes  $e$ , in metal plates  $f$ , attached to the short bars C, (see figs. 2 and 3,) and the opposite sides of the sashes have two hooks,  $g g$ , projecting from them, to fit into openings  $h$ , in metal plates  $i$ , attached to the long bars C'. The hooks  $g$  have a reverse position to the hooks  $d$ , as shown in fig. 7, and slide bolts or catches  $j$  are attached to the sashes D D at the same side where the hooks  $g$  are attached, and fit in holes  $k$ , in the same plates  $i$  as the openings  $h$ .

From the above description it will be seen that in order to remove a sash from the window-frame, all that is required is simply to shove back the catches  $j j$  out from the holes  $k$  in the plates  $i$ . In order, however, to admit of the lower sash being thus drawn out, it is necessary that it be raised above the sill piece  $l$  of the window-frame, and it is also necessary that the bars C C' be held in position, so that they will not be drawn up by the weights as soon as the sashes are removed, a contingency which would occur on account of the lightness of the bars. In order to obviate this difficulty, the bars C' of the lower sash have short bars, E, attached to them by hinges, to catch into notched plates F, secured in the window-frame, the bar being turned and fitted in the upper notch of the plates F when the sash is to be removed, and said bar fitted in the lower notch to serve as a fastening or bolt when the sash is down, as shown in fig. 4. When the lower sash is to be raised, or when a lower bolt or fastening is not required, the bars E are turned, and fitted in grooves in the stiles of the sash, as shown in fig. 1. The bars C C' of the upper sash D are provided with similar hinged bars E', which, when necessary, are fitted in notched plates F' in the parting beads  $b$ .

Thus it will be seen that by this simple arrangement the sashes may be very readily removed from a window and placed therein, a result not hitherto obtained, and which causes the cleaning, or washing, painting, and glazing, of sashes to be attended with considerable difficulty, especially those which are counterpoised or hung with weights.

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

1. The short bars *E*, hinged to the bars *E'* of the lower sash, adapted to catch into notched plates *F*, secured in the window-frame, whereby the bars *C C'* are held in position, so that they will not be drawn up by the weight when the sash *D* is removed, substantially as described, for the purpose specified.

2. The sash *D*, when provided upon one side with the hooks *d*, fitting into notches of plate *f* upon the short bars *C*, and upon the opposite side with reversed hooks *g*, fitting into the notched plates *i* upon the long bars *C'*, as herein set forth, for the purpose specified.

ROBT. THOMAS.

Witnesses:

HENRY AMISS,  
M. P. AMISS.