A. RUDOLPH.
Window-Sash.

No. 207,305. Fig: 1 Patented Aug. 20, 1878.

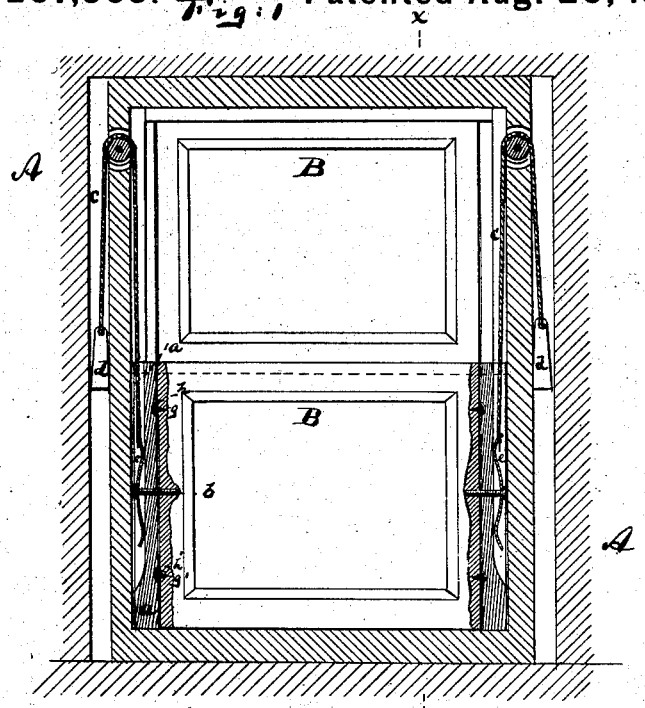


Fig: 2

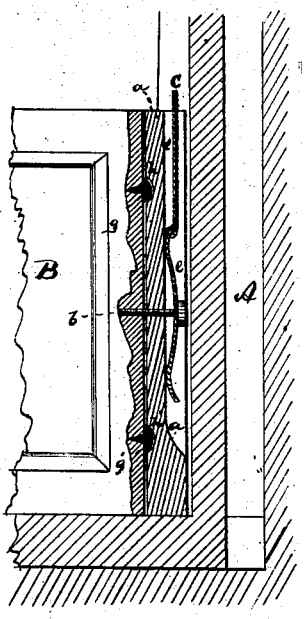


Fig: 3

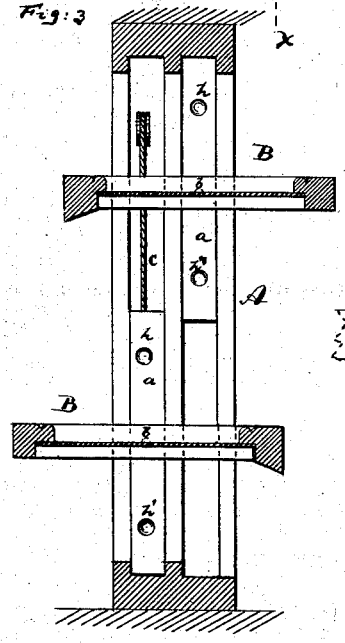
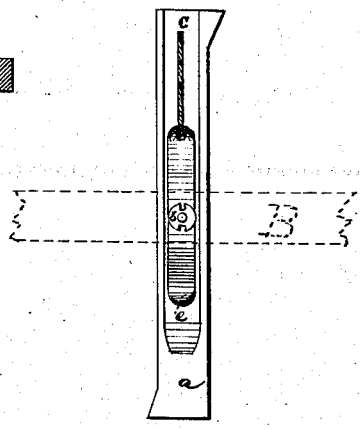


Fig: 4



Witnesses:
John C. Tumbridge
T. B. Mosher

Inventor:
A. Rudolph
by his attorney
A. v. Briesen

UNITED STATES PATENT OFFICE.

ALEXANDER RUDOLPH, OF NEW YORK, N. Y.

IMPROVEMENT IN WINDOW-SASHES.

Specification forming part of Letters Patent No. **207,305**, dated August 20, 1878; application filed July 18, 1878.

To all whom it may concern:

Be it known that I, ALEXANDER RUDOLPH, of the city, county, and State of New York, have invented a new and Improved Window-Sash, of which the following is a specification:

This invention relates to an improved reversible window-sash, which may be locked in a vertical position whether reversed or not.

The invention consists in the combination of a sash having projections with guide-pieces having countersink recesses and with a spring, all as is hereinafter more fully described.

In the accompanying drawing, Figure 1 represents a vertical longitudinal central section of a sash-frame, showing the lower sash provided with my improvement. Fig. 2 is a detail vertical longitudinal central section of part of a sash and frame. Fig. 3 is a vertical transverse section on the line *x x*, Fig. 1, showing the sashes swung into a horizontal position; and Fig. 4 is a detail edge view of one of the sliding guide-pieces.

Similar letters of reference indicate corresponding parts in all the figures.

The letter A represents a sash-frame of the usual construction, and adapted to receive sliding sashes. B B are the two sashes sliding in the frame A. These sashes are made somewhat narrower than the inner horizontal diameter of the sash-frame, in order to allow a guide-piece, *a*, to be placed against each vertical edge of the sash. These guide-pieces are at their middle connected to the stiles of the sashes B by pivots *b*, that enter the middle of the stiles.

The sashes, with their two guide-pieces *a a*, occupy the entire width of the frame A, in the manner sashes usually fit their frames. That edge of each of the guide-pieces *a a* which comes in contact with the jamb of the frame A is grooved to receive the end of the cord *c*, that passes over a pulley and holds the counterpoise-weight *d*, in the ordinary manner.

A spring, *e*, (shown in Fig. 4,) is placed into the groove of the guide-piece *a* around the pin *b*, and presses such guide-piece against the sash and prevents draft at the contiguous edges.

The sashes B, with their guide-pieces *a a*, can slide up and down in the frame A in the customary manner; but the sashes may also be turned into a horizontal position on their pivots *b*, as indicated in Fig. 3, or be completely reversed, so as to bring the outer side of the sash into the room, and vice versa. In this way both sides of the sashes may be conveniently cleaned from the room, whereupon the sashes may be swung back into their normal position.

It will be observed that while the sashes are thus revolved, the guide-pieces *a* do not partake in the movement, but always remain in their vertical position at the edges of the sashes.

In order to prevent the sashes B from spontaneously assuming an inclined or horizontal position, I provide that edge of each guide-piece *a* which is opposite to the stile with two countersunk recesses, *h h'*, equidistant from the pivot *b*, and I also provide the stiles with two corresponding projecting heads, *g g'*, as shown. The spring *e* will press the heads *g g'* into their recesses, and thus retain the sash in place; but when the sash is to be turned, a slight pressure on the sash will cause the spring *e* to yield, and the projections *g g'* will leave the recesses. When the sashes are reversed the projection *g* will enter the recess *h'*, and the projection *g'* will enter the recess *h*, thus securely holding the sashes locked in a vertical position whether reversed or not.

Instead of providing the sashes with the projections *g g'* and the guide-pieces *a* with the recesses *h h'*, the sashes may, of course, be provided with the recesses and the guide-pieces with the projections.

I claim—

The combination of the sash B, which has the projections *g g'*, with the guide-pieces *a a*, having the countersunk recesses *h h'*, and with the springs *e*, substantially as and for the purpose herein shown and described.

ALEXANDER RUDOLPH.

Witnesses:
T. B. MOSHER,
F. V. BRIESEN.