

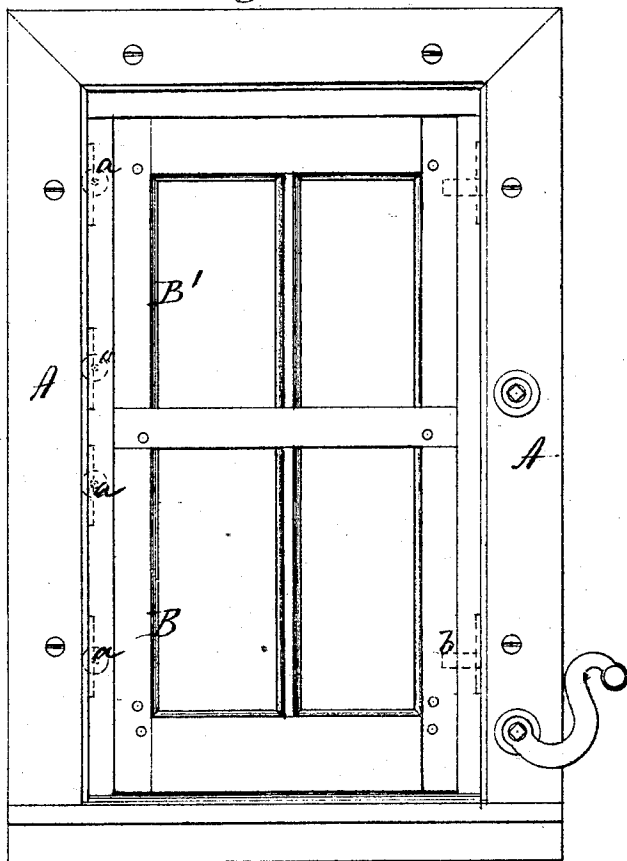
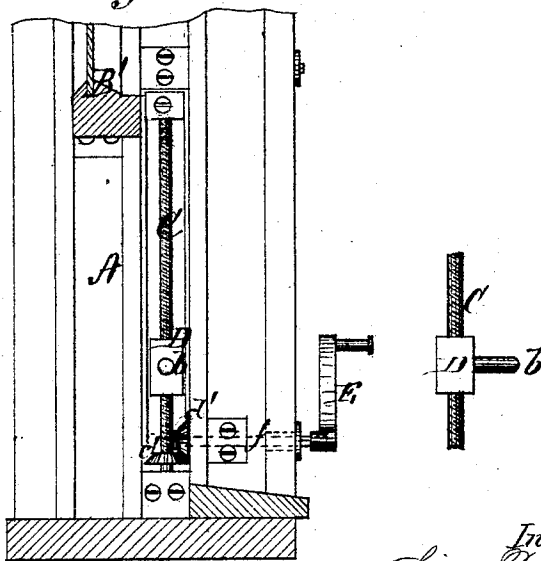


Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE

SILAS P. ROGERS, OF BELMONT, ASSIGNOR TO HIMSELF, J. H. WATT, J. W. WATT, AND STEWART WATT, OF BARNESVILLE, OHIO.

IMPROVEMENT IN DEVICES FOR OPERATING SASHES.

Specification forming part of Letters Patent No. 118,974, dated September 12, 1871.

To all whom it may concern:

Be it known that I, SILAS P. ROGERS, of Belmont, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in the Mode of Operating Window-Sashes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in the employment of vertical screw-shafts combined with a lifting device which enters the sash and travels upon the shaft as it is rotated, substantially as hereinafter set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front view of the entire window; and Fig. 2 is a vertical section, showing the inside of the frame.

A represents the window-frame, and B B' are the lower and upper sashes respectively. These sashes are on one edge provided with rollers *a a*, which bear against the window-frame. On the opposite side of the lower sash B, in the frame, in suitable boxes, is placed an upright screw, C, provided at its lower end with a bevel-cog or

miter-wheel *b*. On the screw C is placed a square nut, D, provided with a horizontal pin, *d*, which passes into a hole in the edge of the sash B. Through the window-frame A is passed a horizontal shaft, *f*, with a bevel-cog or miter-wheel, *d'*, on its inner end, which wheel gears with the wheel *d*, so that by turning the shaft *f*, by means of a crank, E, upon its outer end, the screw C will be revolved. This, of course, causes the nut D to move up or down on the screw, carrying the sash with it. In like manner the upper sash B' is raised and lowered by a similar screw, nut, and pin.

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

1. The screw-shaft C, in combination with the nut or lifting device D, said shaft being rotated substantially as and for the purpose set forth.

2. In combination with the screw C, nut D, and pin *b*, the miter-wheels *d d'*, shaft *f*, and crank E, all constructed and arranged substantially as and for the purposes herein set forth.

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

SILAS P. ROGERS.

Witnesses:

JENKINSON WRIGHT,
JACOB MAYS.