

**J. McNAMEE.**  
**Window-Frames and Sashes.**

No. 137,943.

Patented April 15, 1873.

FIG. 1.

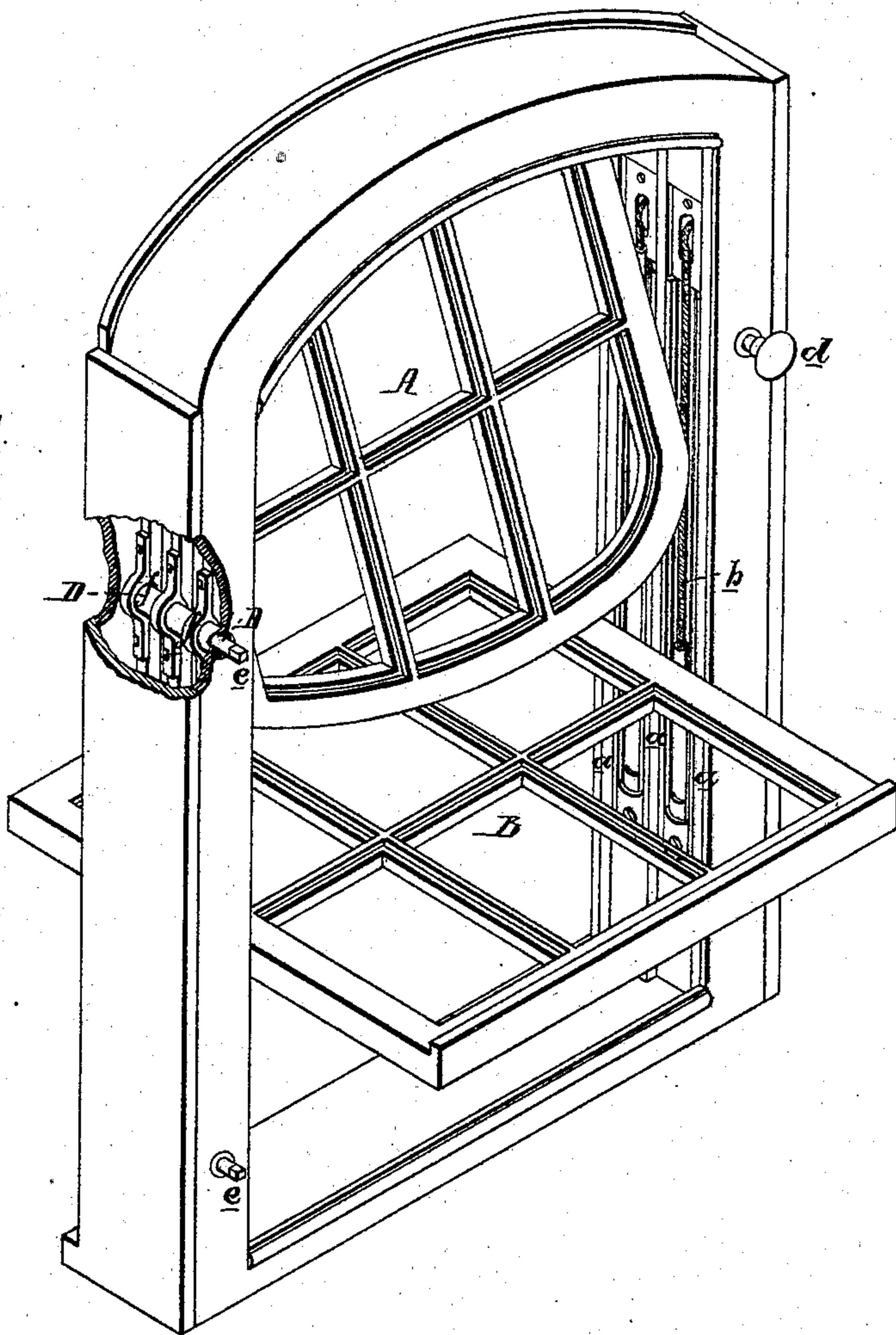


FIG. 2.

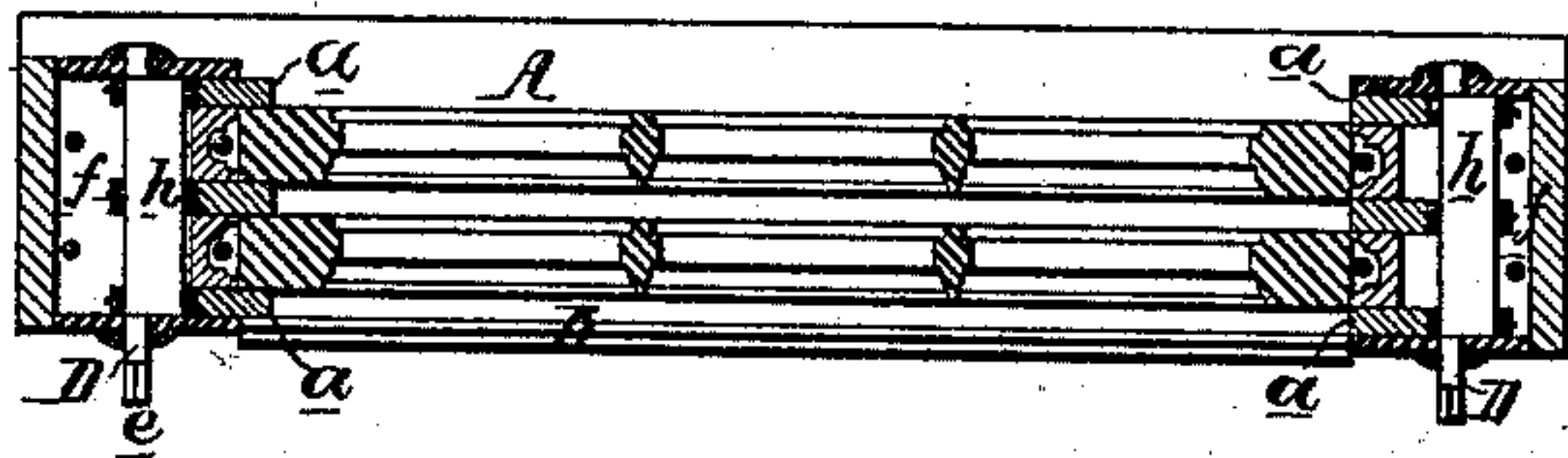


FIG. 3.

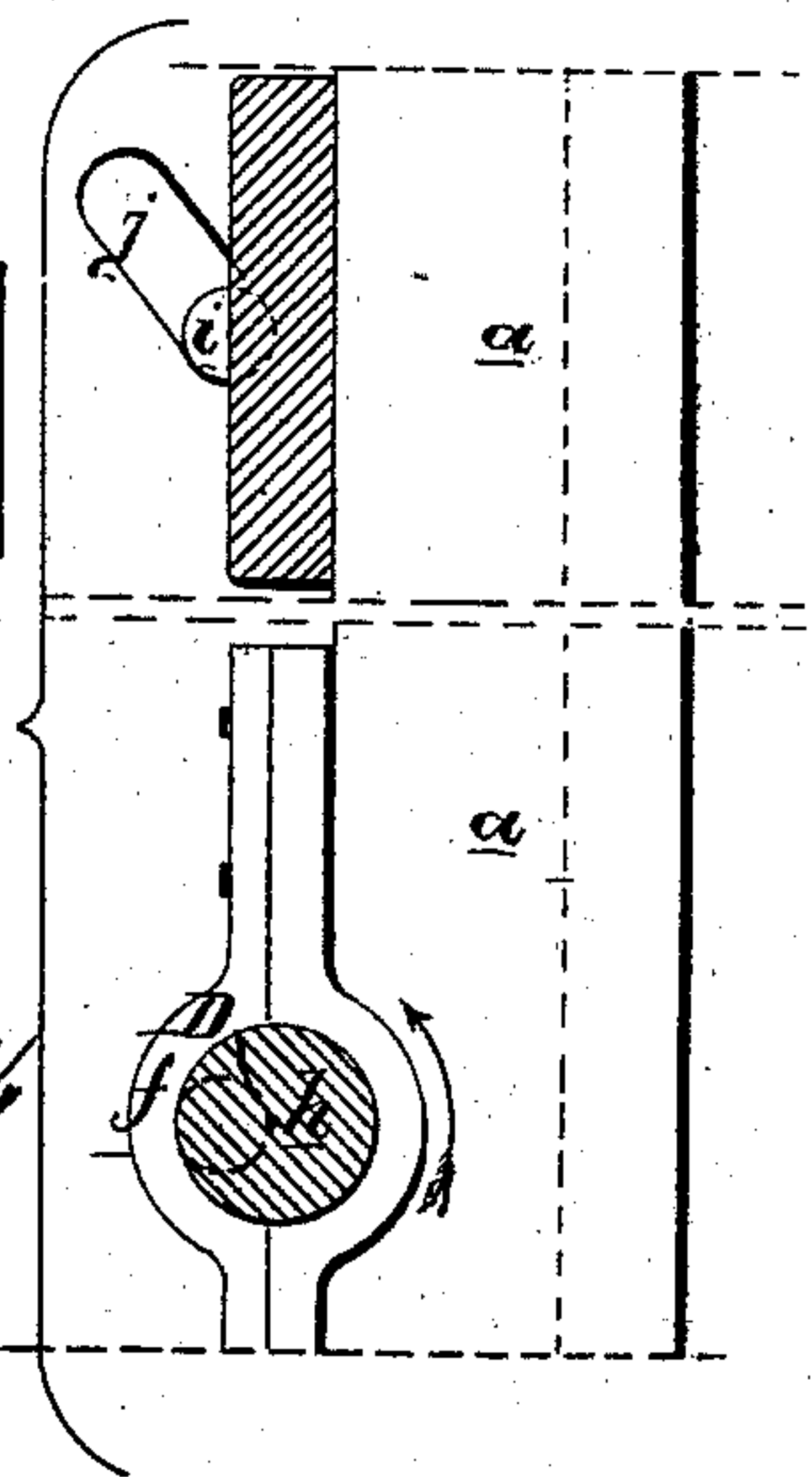


FIG. 4.



WITNESSES

*John K. Rupertus*  
*Harry Smith*

*J. McNamee*  
*by his attys.*  
*Houson & Son,*



# UNITED STATES PATENT OFFICE.

JOHN McNAMEE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND ENOCH W. CLOUD, OF SAME PLACE.

## IMPROVEMENT IN WINDOW FRAMES AND SASHES.

Specification forming part of Letters Patent No. **137,943**, dated April 15, 1873; application filed January 14, 1873.

*To all whom it may concern:*

Be it known that I, JOHN McNAMEE, of Philadelphia, Pennsylvania, have invented certain Improvements in Window Frames and Sashes, of which the following is a specification:

The object of my invention is to enable window-sashes to be turned or reversed in their frames so as to obtain ready access to the outer sides of the same from within for purposes of cleansing or reglazing.

This object I attain in the manner best observed in the perspective view, Figure 1, and sectional plan, Fig. 2, of the accompanying drawing, by so arranging the ways or guides *a*, in which the sashes A and B slide, that they can be simultaneously drawn back from the latter and into the frame, and by hanging the said sashes to the weight-cords *b* by means of trunnions, so that when the guides are thus drawn back either or both of the said sashes can be reversed, as shown, by simply turning them upon their trunnions. The ways or guides *a* are simple strips of wood adapted to recesses in the window-frame, and various devices may be adopted for moving them in and out simultaneously. As stability and a positive movement are, however, necessary, I prefer to control and operate the said guiding-strips by means of eccentric spindles D, as shown in Figs. 1, 2, and 3 of the drawing. Each of these eccentric spindles turns in bearings in the window-frame, and is operated by means of a knob or key, *d*, adapted to its squared end *e*. A strap, *f*, secured to the rear edge of each guide, embraces the eccentric portion *h* of the spindle, by turning which, therefore, the three guides may be moved in and out simultaneously at one end or the other, and if the upper and lower spindles at one side of the frame be turned at the same time, the guides which they control will be moved in or out simultaneously throughout their entire length. This object may, however, be attained by the use of one eccentric spindle only, by adapting projecting pins *i* on the guide-pieces to inclined slots *j* in the frame, as shown in Fig. 3, for, as the guide is raised by turning the eccentric, as indicated by the arrow, it must, in rising

through the slot, be also drawn backward to the same extent that it is retracted by the eccentric if the slot be properly inclined, and the guide will be correspondingly moved forward throughout its entire length, when the movement of the eccentric is reversed.

When the guides *a* are very long I propose to couple them at or about the center in order to insure uniformity of movement.

It is essential that the trunnions at the opposite sides of the sashes should turn freely in their bearings at the ends of the cords, and that the said cords and sashes should be so connected as to prevent all risk of accidental disengagement when the sash is reversed and supported solely by the cords.

The device illustrated in Fig. 4 gives the required freedom of movement with the necessary degree of safety. It consists of a plate, *m*, having, at its upper end, a tapering socket, *p*, in which the knotted end of the sash-cord is wedged, and at its lower end a T-shaped slot, *q*, through which the trunnion *r*, secured to the edge of the sash, is passed. The weight of the sash retains the trunnion in the lower portion of the slot, in which it can turn freely, and an enlargement at the end of the trunnion prevents the withdrawal of the latter from the slot, even if it should be raised to the top of the same by suddenly raising or lowering the sash. The trunnion can only be withdrawn when the sash is turned to the horizontal position illustrated in Fig. 1, and lifted bodily, so as to bring the enlargement or head of the said trunnion opposite the enlarged upper portion of the slot.

I prefer, in carrying out my invention, that the guides at both sides of the window-frame should be movable, but the sashes could be disengaged from the frame and reversed if the guides at one side only were movable.

It is not absolutely necessary that the trunnions should be secured to the sashes, as the arrangement might be reversed by adapting trunnions projecting from plates suspended from the sash-cords to recesses formed in the edges of the sashes.

I claim as my invention—

1. A window-sash suspended from or pivoted

to the balancing-cords, in combination with adjustable ways at one or both sides of the frame, substantially as set forth.

2. The combination of the said adjustable ways with the eccentric spindles or equivalent device for operating the ways, as described.

3. The combination, substantially as described, of the trunnion *r*, secured to the sash, and having an enlarged outer end, with the plate *m* secured to the cord, and having a T-

shaped slot adapted for the reception of the trunnion.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN McNAMEE.

Witnesses:

WM. A. STEEL,  
HUBERT HOWSON.