H. L. Smith,

Sash Balance.

No. 9,309. Patented Oct. 5, 1852.

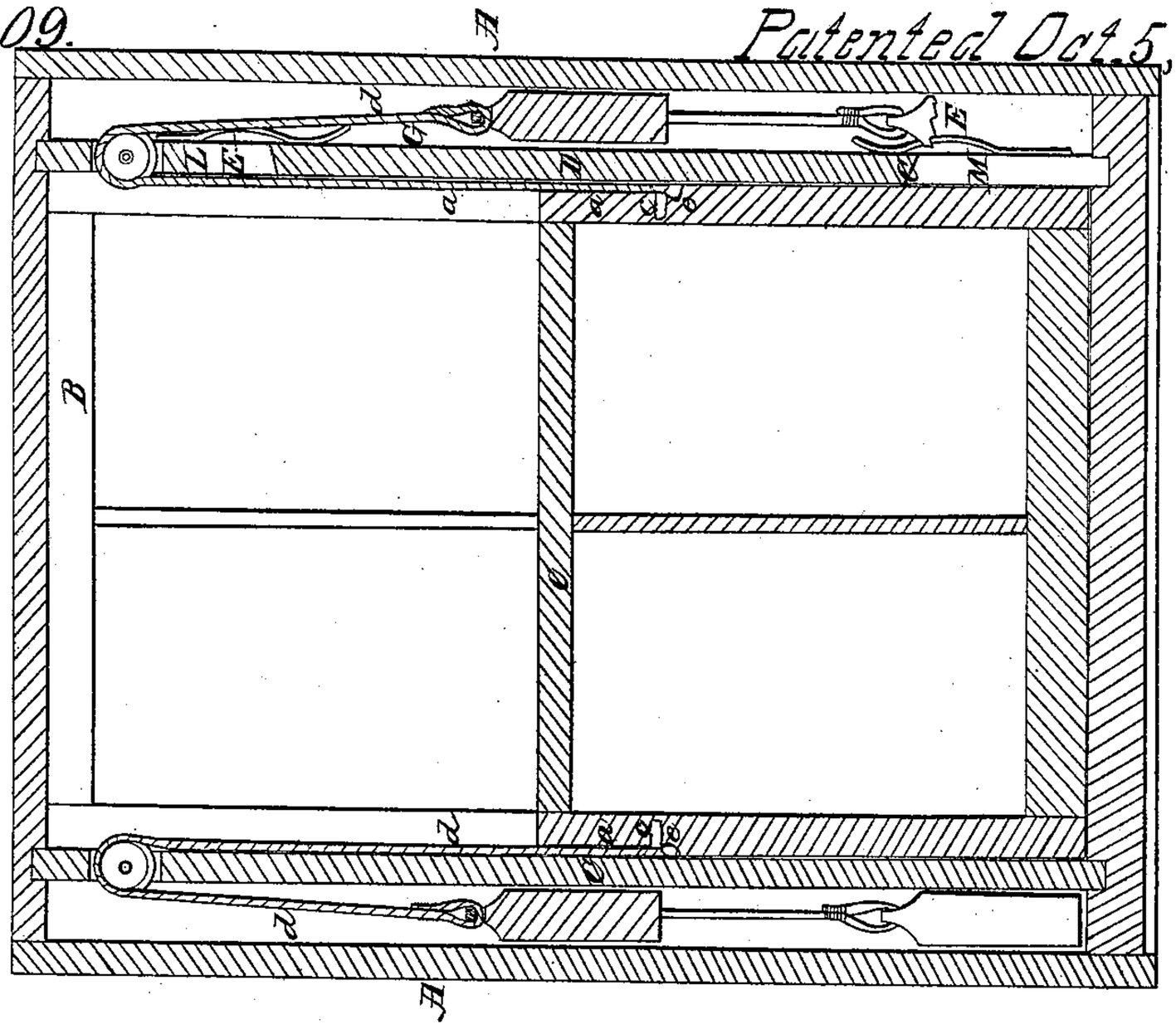

Fig. 2.

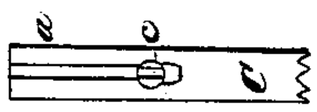

Fig. 3.

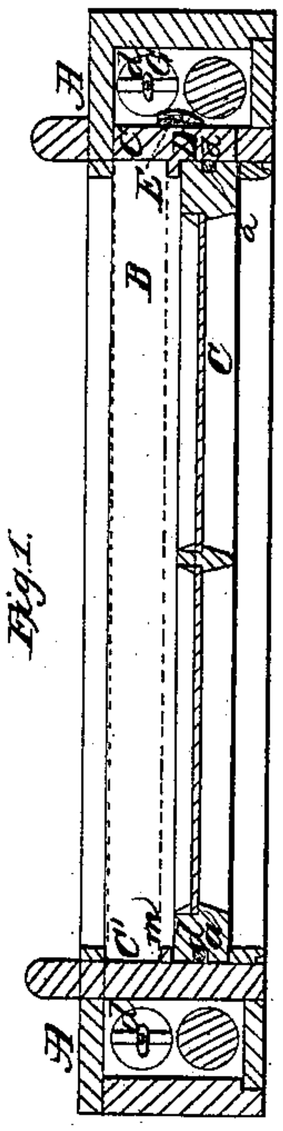

Fig. 1.

UNITED STATES PATENT OFFICE.

HENRY C. SMITH, OF PORTLAND, MAINE.

WINDOW-FRAME.

Specification of Letters Patent No. 9,309, dated October 5, 1852.

To all whom it may concern:

Be it known that I, HENRY C. SMITH, of Portland, in the county of Cumberland and State of Maine, but now residing in Washington, in the District of Columbia, have invented a new and useful Improvement in window-frames, by which invention I am enabled when the lower sash is elevated some distance above the sill or the upper one depressed a like distance to remove such sash from the frame without first taking off the inside bead and also able to keep the sashes in place or prevent them from being so taken out when the window is closed; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings Figure 1 denotes a horizontal section of a window frame made according to my improvement. Fig. 2 is a vertical section of the same.

In the said drawings A denotes the window frame of which B is the upper and C the lower sash.

C′, C′, are the pulley stiles.

My improvement consists in making a portion D of one of the pulley stiles movable or separate from the remainder or parts L, M, of the stile, and keeping it in place by means of one or more springs E, E, such as will allow it to be pressed back into the space G in which the weights move.

The piece D is made somewhat longer than the height of the sash. In order to remove the sash from the frame it is only necessary to raise or lower it until its middle part is in line with the middle part of the piece D. Next press it laterally against the piece D so as to cause it and the piece C to move laterally far enough to enable the sash to be drawn by the bead I, the two beads being immovable and seen at I, K.

The upper part of each edge of the sash frame is grooved downward as seen at *a* in Figs. 2 and 3, the latter being a view of the upper part of the edge of the sash. Near the lower part of the groove but not entirely at the bottom of it, a metallic screw *c* is screwed through the groove and into the sash. The head of this screw is grooved out of a size just sufficient to receive the weight line *d* on which a knot *e* is made. The knot rests in that part of the groove *a* which is below the head of the screw. The said groove is to be made of an even width and is intended to easily receive the weight line, the lower part of the groove or that below the head of the screw being made large enough to just receive the knot of the cord. The knotted cord when placed in the groove with its knot below the screw, will be held in place by the pulley stile when the sash is put in place against the stile. On moving the sash away from the stile and canting or throwing it a little, the weight cords easily slip out of their grooves or become disengaged from the sash.

The movable part D of the stile is arranged so that either the lower sash must be elevated half its height or thereabout, or the upper one depressed a like distance, before the removal of either from the window frame can be effected. Under these circumstances when the sashes are closed they cannot be removed from the window frame, as the stationary parts L, M, operate to prevent the same.

I would remark that I do not in ordinary circumstances make use of the piece D and its springs for the purpose of holding a sash up by pressure against its side. In this respect I wish it understood that my invention differs entirely from that patented on the 23d of December 1851, by one Samuel D. Nims, as I employ weights and cords or their equivalents in the usual way to balance the sash or sashes. If the whole jamb or pulley stile is made movable as is the case in the invention of the said Nims, the window sashes cannot be or are not secured in place or prevented from being removed when the window is closed, or the lower part of one of them is below the lower end of the piece D, while the upper part of the other is above the upper part of the said piece D. This is the case in my invention, and therefore when the window is closed and the two sashes fastened together by a sash fastening, they cannot be taken out by lateral pressure produced by a person on the outside of the window. I therefore do not herein intend to claim to arrange and secure window sashes in their frames "by means of grooves in the sides of the window frame to receive the edges of the sashes, and making one or both entire jambs or pulley stiles movable and elastic by means of springs", as is claimed by the said Nims, but

What I do claim is—

1. The improvement of making a part D of the pulley stile movable and the re-

mainder or parts L, M, stationary, in combination with applying one or more springs to the said part D to hold it in place, all substantially in manner and for the purposes as specified.

2. And I also claim the improved mode of connecting the weight line to the sash by which it may be confined in place by the pulley stile when the sash is in place, and readily removed from the sash whenever the latter is withdrawn from the window frame, the said improvement consisting in the groove *a*, and screw *c*, made as described and applied to the sash as described, in combination with the knot on the weight line.

In testimony whereof I have hereto set my signature, this fourteenth day of June A. D. 1852.

HENRY CLAY SMITH.

Witnesses:
J. W. Beck,
I. H. Kelly.