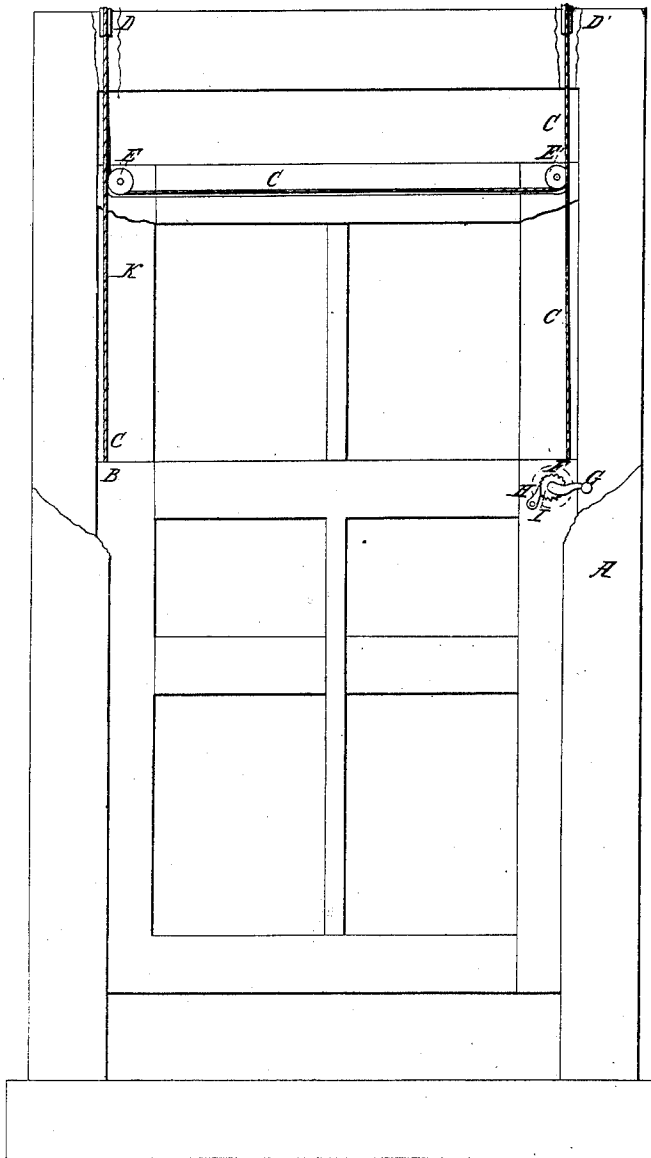


*J. M. Merryman,*

*Sash Balance.*

*N<sup>o</sup> 45,564.*

*Patented Dec. 20, 1864.*



*Witnesses:*

*J. B. Woodruff*  
*E. R. Morrison*

*Inventor:*

*John M. Merryman*

# UNITED STATES PATENT OFFICE.

JOHN M. MERRYMON, OF INDIANAPOLIS, ASSIGNOR TO HIMSELF, AND WILLIAM GORSUCH, OF RICHMOND, AND KILBY FERGUSON, OF INDIANAPOLIS, INDIANA.

## IMPROVEMENT IN RAISING AND LOWERING WINDOW-SASHES.

Specification forming part of Letters Patent No. **45,564**, dated December 20, 1864.

### *To all whom it may concern:*

Be it known that I, JOHN M. MERRYMON, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and Improved Mode of Hanging Window-Sashes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in providing window-sashes, placed in a frame in the ordinary way, with a cord and pulleys so arranged that the sashes may be raised and lowered, at pleasure, to any given point, mutually or separately, and at the same time preserve an equal balance.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In each corner of the upper part of the frame A, I place, in the ordinary way, a sash-pulley, D D', underneath and crosswise the upper cap of the frame A, directly above the upper corners of the sashes B and K, when raised in the frame A. I make a groove in and along the top of the upper sash, K, and in each end of said groove I place a small pulley, E E', and in the right-hand top corner of the bottom sash, B, I place a spool-pulley, F, set tight on a journal and crank, G, crosswise the sash B, said journal being placed in plates secured on each side of said sash, and secured on said journal, on the inside of said sash B, I place a ratchet-wheel, I, and contiguously I place a pawl, H.

Now, in order to rig my sashes, I secure one end of my cord C to the left-hand top corner of the sash B, and run it up the frame A, over the pulley D, thence under the small pulley E, and along the said groove under the small pulley E', thence over the pulley D', and thence down the frame A to the spool-pulley F, to which said cord C is secured, and around which it is wound.

Now, when thus rigged, if you raise the bottom sash, B, the top sash, K, will descend, and vice versa; and if you throw back the pawl H from the ratchet-wheel I the top sash, K, will descend of its own weight, and so with the bottom sash, B, when it is raised; and when you wish to raise either

sash you turn the crank G to the right till the sashes are drawn up to their place by winding the cord C on the spool-pulley F, when they are secured to their place by the pawl H, working in the ratchet-wheel I. The spool-pulley F may be placed at any point along the top or right-hand side of the sash B, owing to the height of the window. In cutting off the corner of the sash B for the reception of the spool-pulley F, if the sash is too much weakened, I strengthen it by securing a casting, L-shaped, on the corner of the sash, with a hole in it, through which the cord C will pass.

Owing to the weak and slender mechanism of some sash-frames, it is sometimes better to rig window-sashes with my arrangement without using the spool-pulley F and its attachments; and in this case I make a suitable hole through the right-hand top corner of the bottom sash, B, through which I bring the cord C instead of attaching it to the spool-pulley F, as in the other case, and let the end of the cord C hang down to the floor; and at the point where the cord C comes through the sash, as above described, I place a self-acting catch or fastening, that holds the cord C secure when it is not being handled; and now, by taking the suspended end of the cord C and drawing or giving it I can raise or lower either sash at pleasure. This plan is cheaper and more easily worked than to use the ratchet-wheel, spool-pulley, and its attachments.

In rigging window-sashes it is sometimes found that one sash is lighter than the other, and will not balance. In that case I bore holes in the thick part of lighter sash and put in lead till the weight is made equal, and then stop up the holes. I have found that the india-rubber or gutta-percha cord is more preferable for hanging window-sashes than the rope or hemp cord, being more flexible and durable and fully as cheap. If it is found that the cord C is rough and stiff in working, and binds on the pulleys D and D' and E and E', so as to produce too much friction, I set the pulleys D and D' diagonally in the frames, so as to avoid this difficulty. At the point in the lower sash, B, where I place the spool-pulley F, whether at the side or bottom of said sash, I cut out a circular place to receive

said spool-pulley, and fit in said circular place a casting of same shape and screw it on tightly. This fully strengthens the sash, and answers for the edges of the plates on each side of the sash to rest on, and strengthens them at the same time.

What I claim as my invention, and desire to secure by Letters Patent, is—

The use and application of one continuous cord, C, in the manner and for the purposes as herein described.

JOHN M. MERRYMON.

Witnesses:

JOHN D. BLOOR,  
W. THOMPSON.