(No Model.)

A. PECK.

SASH BALANCE.

No. 367,439. Patented Aug. 2, 1887.

FIG. 1.

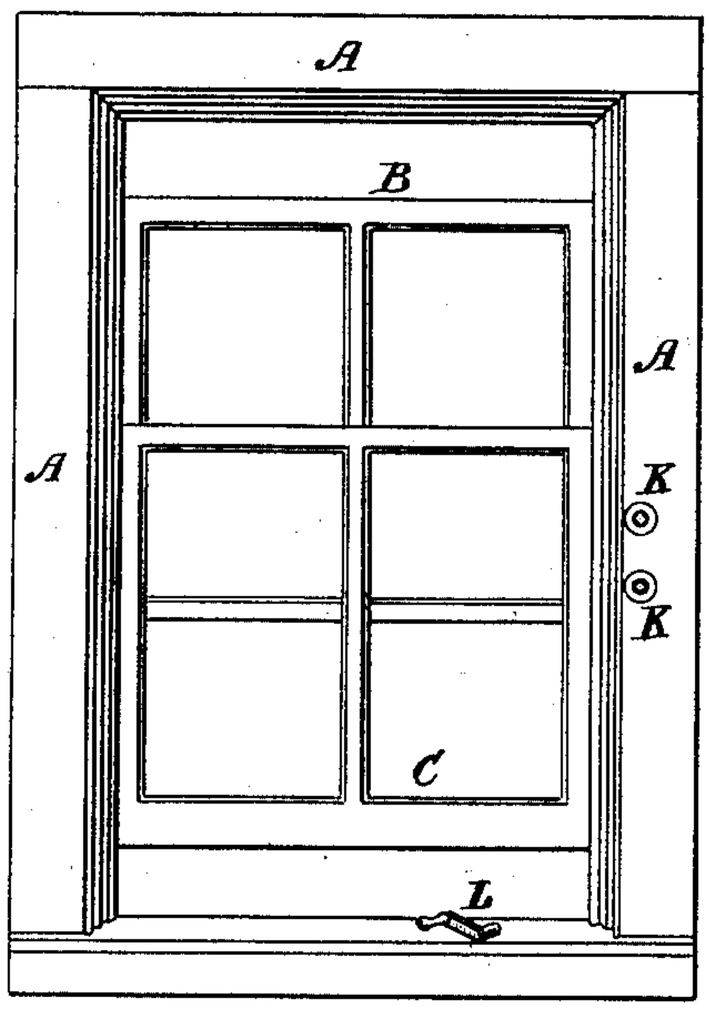


FIG. 4.

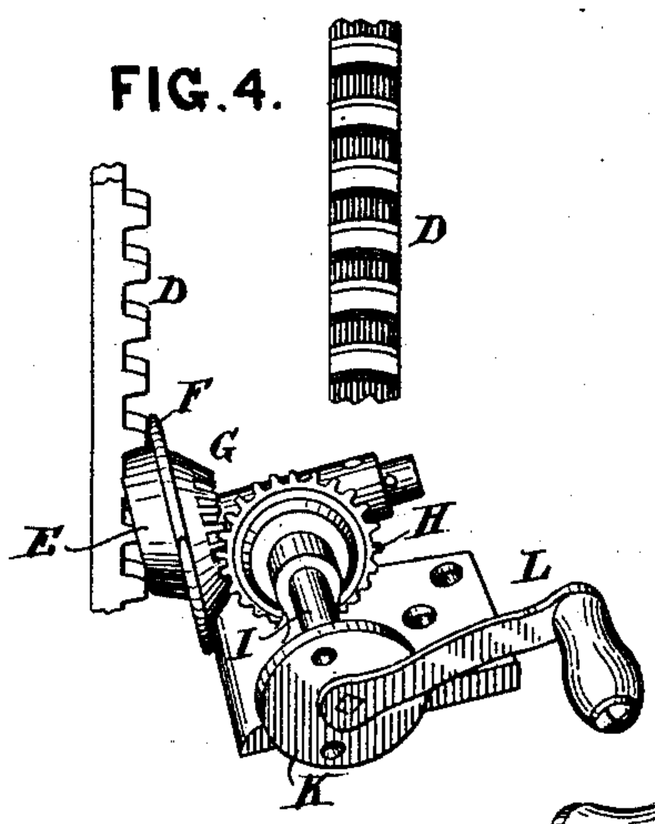


FIG. 5.

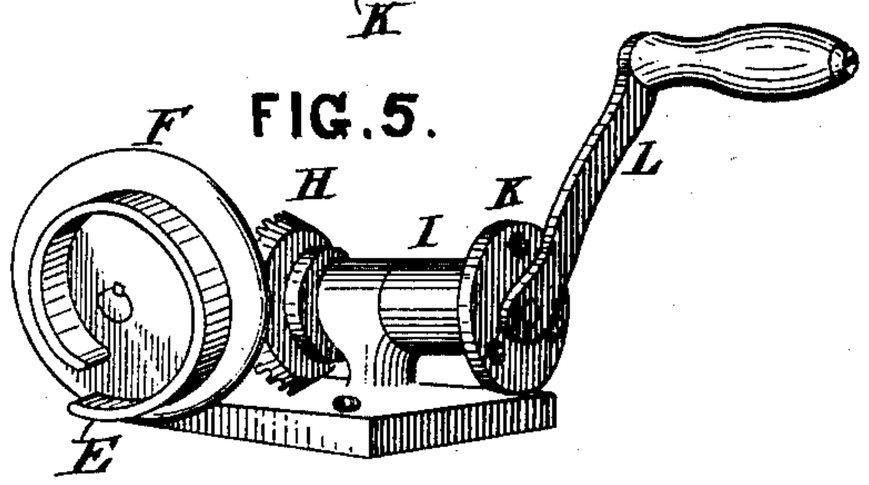


FIG. 2.

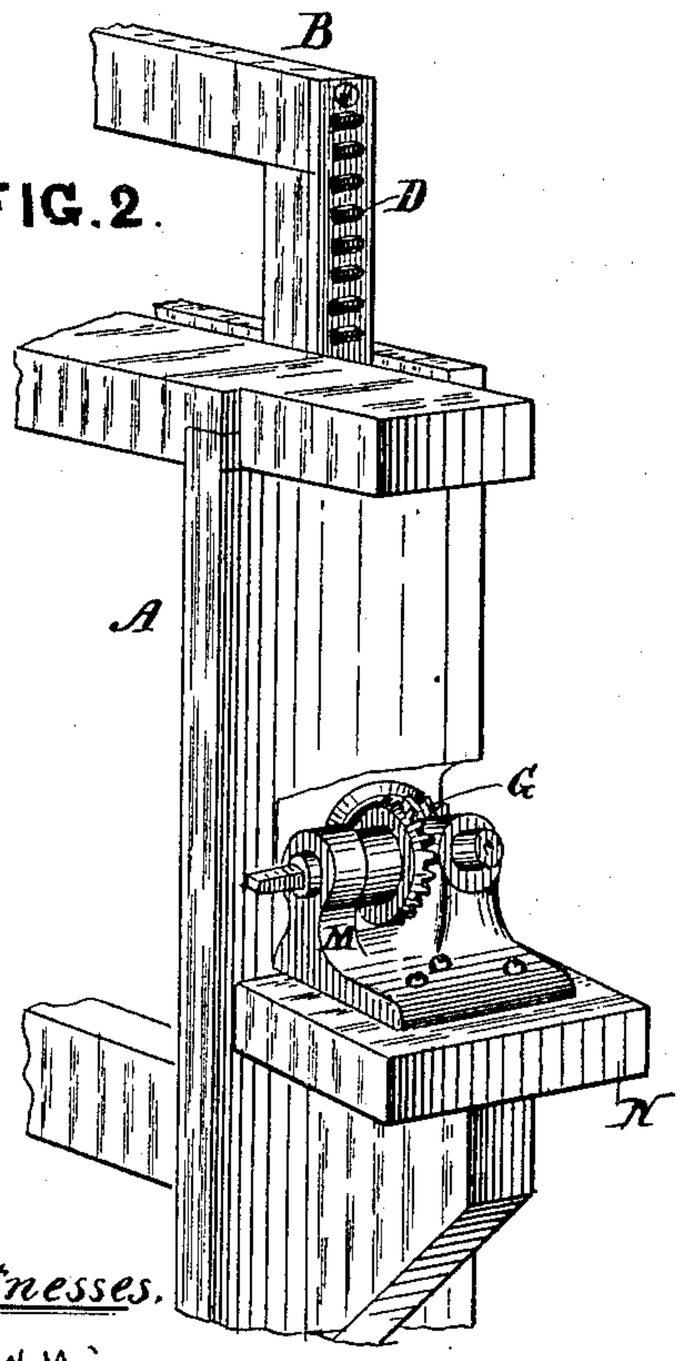
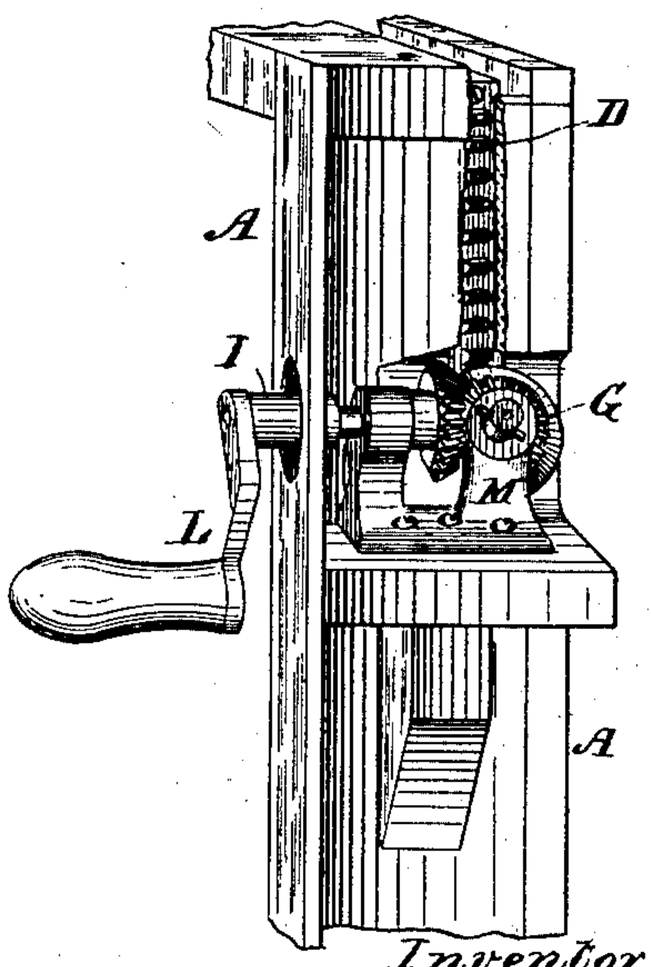


FIG. 3.



Witnesses.
Frank W. Miller
Wm. C. Peck.

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UNITED STATES PATENT OFFICE.

ABEL PECK, OF NEWBURG, NEW YORK.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 367,439, dated August 2, 1887.

Application filed January 6, 1886. Serial No. 187,792. (No model.)

To all whom it may concern:

Be it known that I, ABEL PECK, a citizen of the United States, residing at Newburg, in the county of Orange and State of New York, have invented a new and useful Improvement in Devices for Operating and Supporting Window-Sashes, of which the following is a specification.

My invention relates to an improved means for raising and lowering window-sashes and supporting them in any open or partially-open position.

The invention consists in the employment of racks attached to one side of the upper and lower window-sash, respectively, in connection with an eccentric or spirally-arranged rim that engages with the teeth of the said rack, and is attached to a disk to which a rotary motion is imparted through gears operated by means of a crank applied to the shaft of one of the gears, the rack and connecting parts being concealed from view by the window-frame.

Referring to the accompanying drawings, Figure 1 is a view of a window and its frame with each sash partially open. Fig. 2 is a perspective view, on an enlarged scale, of a portion of a window-frame and sash. Fig. 3 is a side view in perspective of a portion of the interior of the frame, showing the gears and crank attachment. Fig. 4 represents a portion of one of the racks and the connecting mechanism. Fig. 5 is a perspective view of the eccentric-rim, the shaft that carries one of the gears, and the crank.

A represents a window-frame, B the upper, and C the lower sash. On one side of the upper and lower sash, respectively, is secured a rack, D, the teeth of which are to be somewhat curved, as shown in Fig. 4.

Within the frame A is an eccentric or spirally-arranged rim, E, which engages with the teeth of rack D, and is secured to a disk, F, on a shaft journaled in bearings on a bracket, M, secured to a projection or shelf, N, on the inside of the frame A, and on the opposite side of the disk F is a bevel-gear, G, which engages with a bevel-gear, H, on a shaft, I, to the outer end of which is fitted a crank-handle, L. There are two sets of the spiral rims, gears, and connections, one set to be applied to the upper and one to the lower sash.

The end of the shaft I, to which the handle L is applied, passes through holes in the frame A, on the outside of which holes are plates or escutcheons K, secured to the frames. The teeth of rack D are curved to conform to the curvature of the spiral rim E.

In raising and lowering the sashes B and C, the crank-handle L is applied to the ends of the axles I, as shown in Fig. 1, and to whatever position the sash is raised it will there be held, as the rim E will not turn, whatever weight it may be subjected to by the teeth of the rack.

The upper and lower sashes may be raised and lowered independently of each other.

By means of my invention I dispense with weights and balances, and the operative parts are all concealed from view, and, moreover, the finish of the sash and frame is not marred.

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

The combination of the frame A, having the shelf or projection N on its inside, the window-sash having a rack-bar, D, secured to its side edge, a bracket, M, secured to the shelf N, the disk F, mounted on a shaft journaled in the bracket M, and provided on one face with a spiral rim, E, engaging the rack-bar D, and on its other face with the bevel-gear G, and the shaft I, journaled in the bracket M, and carrying the gear-wheel H, meshing with the gear G, substantially as specified.

ABEL PECK.

Witnesses:
WM. C. PECK,
FRANK W. MILLER.