J. HOURIET.

SASH-BALANCES.

No. 187,857. Patented Feb. 27, 1877.

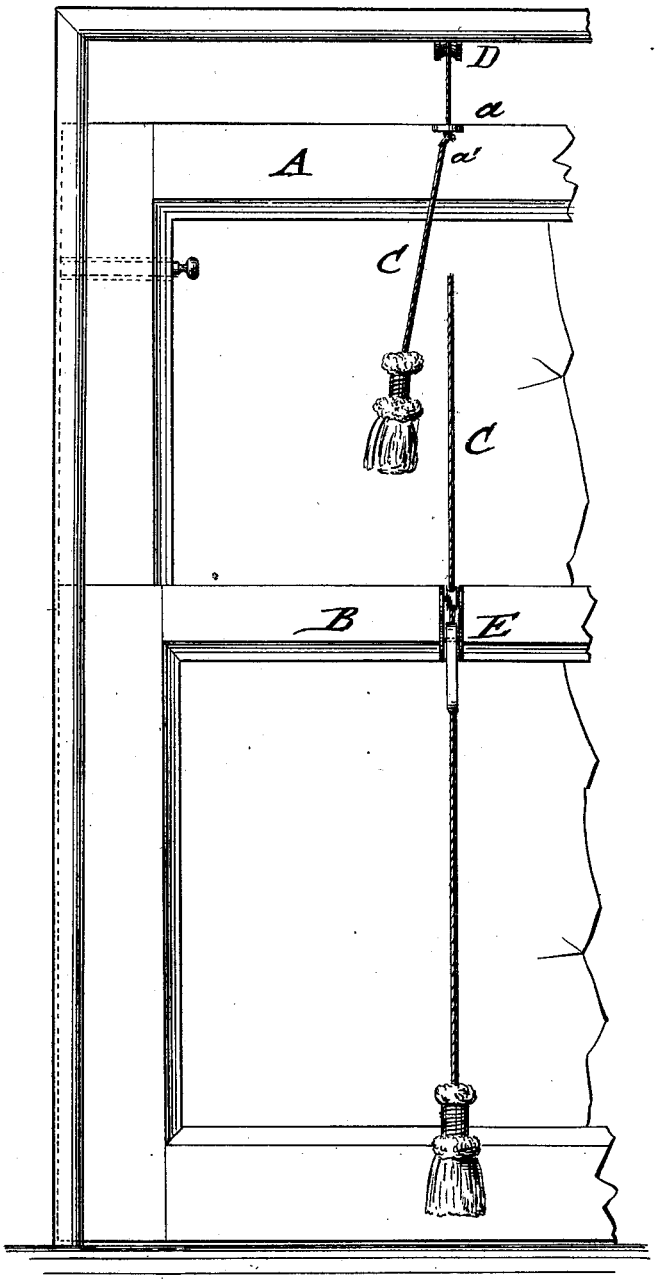

Fig: 1.

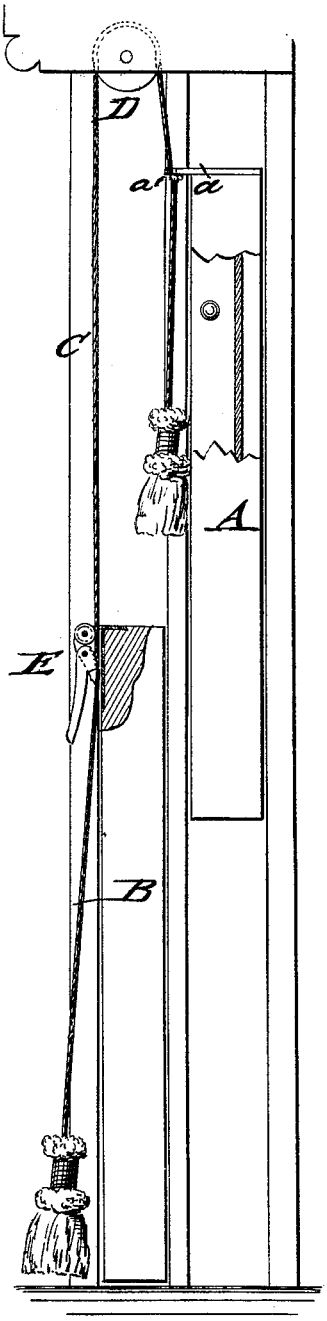

Fig: 2.

WITNESSES:

Chas. Nöta

John Goepel

INVENTOR:

J. Houriet

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JULES HOURIET, OF TERRE HAUTE, INDIANA.

IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. **187,857**, dated February 27, 1877; application filed April 4, 1876.

To all whom it may concern:

Be it known that I, JULES HOURIET, of Terre Haute, in the county of Vigo and State of Indiana, have invented a new and Improved Device for Raising and Lowering Window-Sashes, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front view, and Fig. 2 a side view, of my improved device for raising and lowering window-sashes, shown as applied to a window.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide a cheap and simple device for raising and lowering window-sashes, that is specially adapted to large school and church windows, so as to admit the setting of the same to any desired position in an easy and convenient manner.

The invention consists of the combination, with the upper and lower sashes, of a cord that is connected to the upper sash, clamped to the lower sash, and passed over a pulley at the top of the window-casing.

In the drawing, A represents the upper, B the lower sash, and C the connecting cord or chain that is employed to raise and lower either or both sashes. The sash-connecting cord C may be made of wire or other durable yet flexible material, and is preferably attached to the center of each sash, the upper shorter end of the cord sliding in a perforated guide lug or staple, *a*, at the top rail of the upper sash, being prevented from being pulled beyond a certain point by a knot, *a'*. The cord C passes from guide-staple *a* upward over a pulley, D, at the top part of the window-casing, then downward and through a clamping mechanism, E, at the top rail of the lower sash to considerable length below the same.

The clamp-piece E may be readily released from the cord, to allow the free sliding and adjusting of the same, or the firm clamping of the cord, as required, for the setting of the sashes. The upper sash requires a sash-lock, by which the same is retained at the required point, the lower sash being held by this action of the clamp.

When both sashes are desired to be opened, the top sash is unlocked and the lower sash raised, which produces simultaneously the lowering of the upper sash by its own weight until the sashes are in the required position.

To lower the upper sash the clamp is released from the cord, and fastened again when the sash is down far enough.

For raising the lower sash the upper cord is taken hold of and pulled till the sash arrives at the required height, where it is fastened by a suitable sash-lock, it being lowered again by its own weight on the release of the lock.

When the sashes are provided with balance-weights the raising and lowering are accomplished in a still more easy and convenient manner than with sash-fasteners.

The device is of special advantage for large windows in halls, churches, &c., where the sashes are at present reached with great difficulty. The device may be attached to any window at small expense, and thereby the sashes worked with great facility.

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

In a sash-balance, the knotted cord C, having one end clamped to lower sash and the other passed over case-pulley through metallic loop, and provided with an extension below the loop, said extension forming a handle by which the lower sash may be raised while the upper remains stationary.

JULES HOURIET.

Witnesses:

ISAAC H. C. ROYSE,

ANDREW GRIMES.