

No. 847,627.

PATENTED MAR. 19, 1907.

R. WASHBURN.
SASH LIFTER.

APPLICATION FILED SEPT. 4, 1906.

Fig. 1.

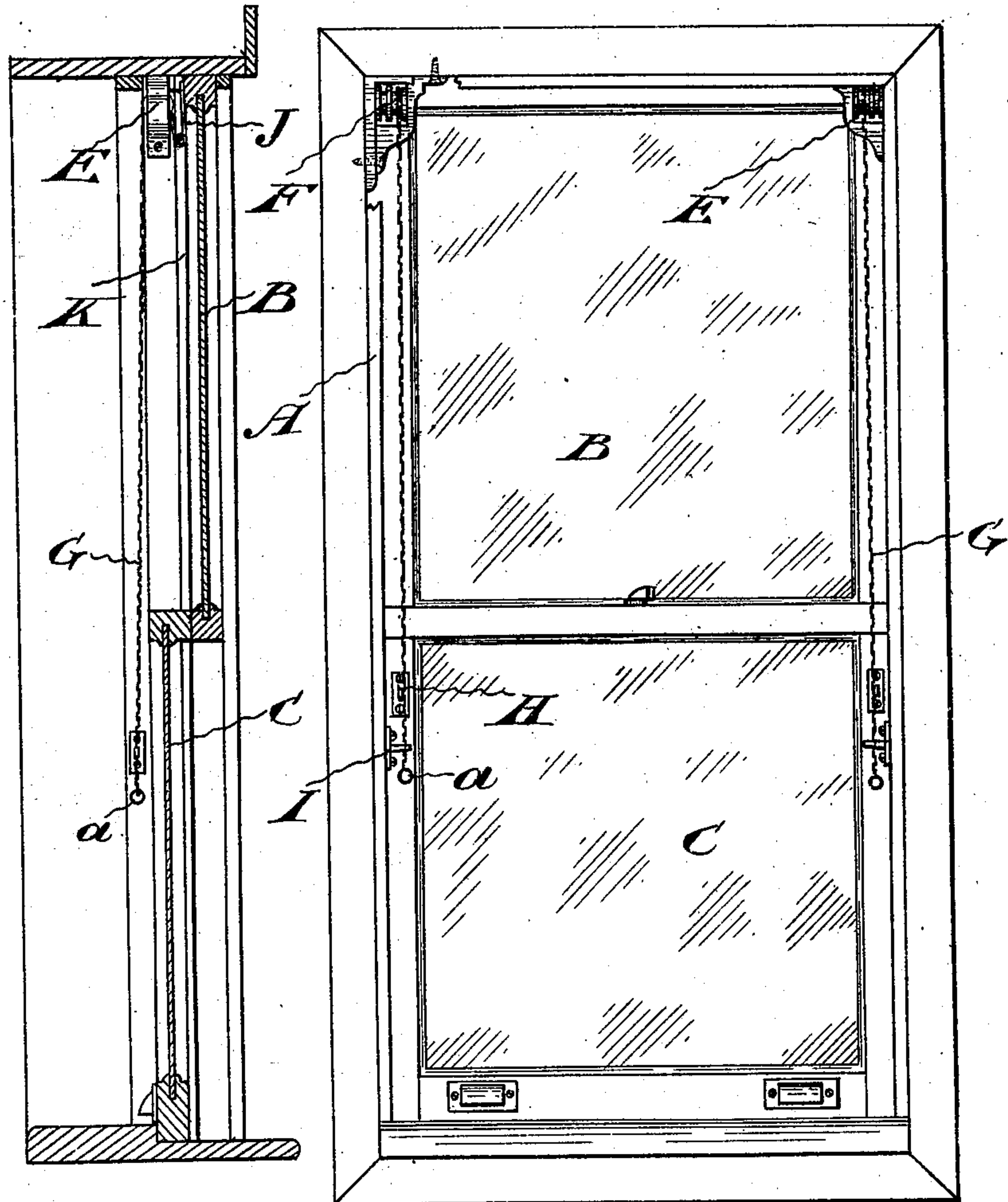
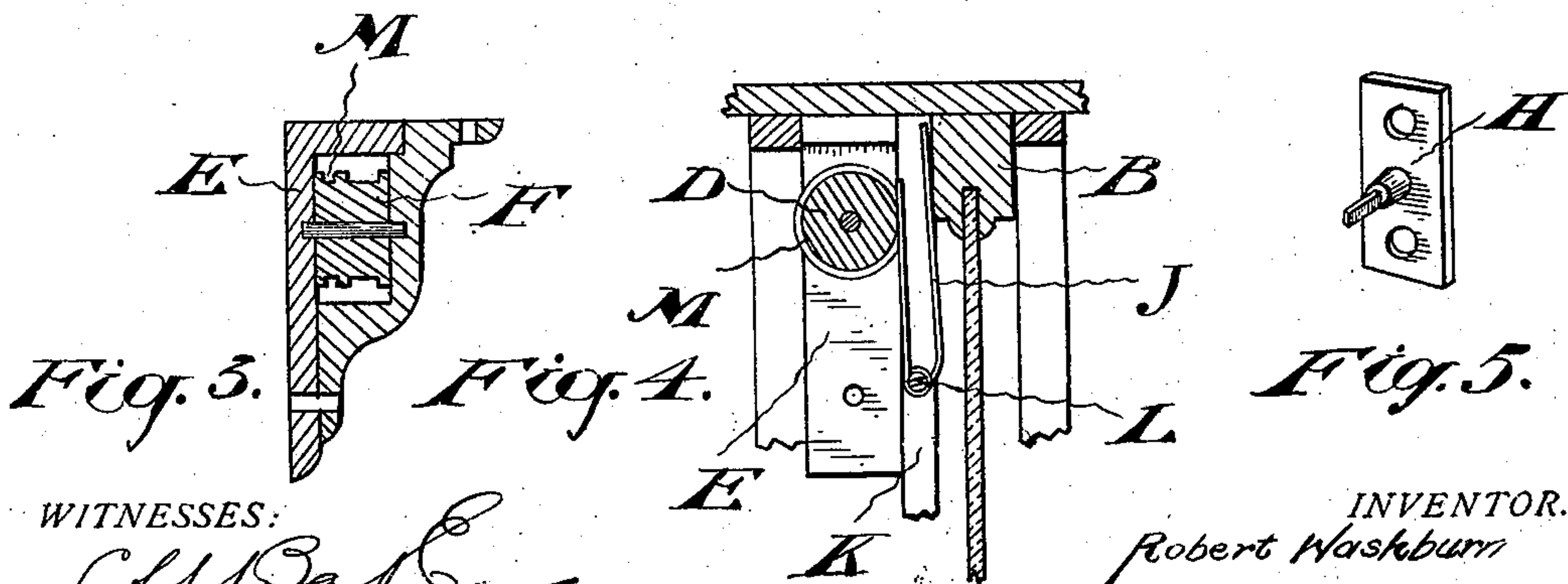


Fig. 2.



WITNESSES:

Chas. B. L.
Belle Lague

INVENTOR.

Robert Washburn
BY *Ridout & Maybee*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ROBERT WASHBURN, OF HARRISTON, ONTARIO, CANADA.

SASH-LIFTER.

No. 847,627.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT WASHBURN, of the town of Harriston, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Sash-Lifters, of which the following is a specification.

My invention relates to an attachment applied to an ordinary window not provided with the ordinary balance-weights which enables the window to be raised or lowered either at the top or bottom, as may be desired, and which comprises a chain connected to each side of the upper sash at the top, passing over a pulley suitably journaled at the top of the window-frame and extended downward to a point suitable for connection with either of two sets of fasteners, one set secured to the frame of the lower sash and the other to the window-frame. I find that in such a construction the chains have a tendency to draw the upper sash out of the perpendicular and cause it to bind, particularly when it is almost closed. I overcome the difficulty by mounting the pulley at each side in a bracket secured to the window-frame adjacent to the parting-bead and by securing to the parting-bead a bent spring, one arm of which engages a groove formed in the pulley, while the other is in position to engage the upper sash as the latter is raised to close it, substantially as hereinafter more specifically described and then definitely claimed.

Figure 1 is a vertical section of a window provided with my improved sash-lifter. Fig. 2 is a front view of the window. Fig. 3 is a section of one of the pulleys and the bracket in which it is supported. Fig. 4 is an enlarged sectional detail showing particularly the spring engaging one of the pulleys in the upper sash-frame. Fig. 5 is a perspective detail of one of the fasteners for the chains.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is the window-frame, B the upper sash, and C the lower sash. Inside the frame A at the top I secure the brackets E. In these brackets are journaled the pulleys F. Over each pulley passes a chain G, one end of each chain being secured to the upper portion of the upper sash B, while its lower end is pref-

erably provided with a ring *a*, which may be grasped by the hand.

Secured to the lower sash C at each side is a fastener H, which is suitably shaped so that any link of the chain may be engaged therewith, as shown. A similar set of fasteners I are secured one to each side of the frame A, preferably somewhat above the fasteners H. When the chains G are engaged with the fasteners H, the sashes balance one another, and the raising or lowering of one simultaneously lowers or raises the other.

By engaging one of the chains G with a fastener I the upper sash may be held at any desired height and the sash C then lifted and held at any desired height by engaging the other chain G with the fastener H at the other side of the window.

My present invention lies particularly in the springs J, which engage the rollers D and the upper sash B, as shown particularly in Fig. 4. The springs are formed of wire bent to form two arms. At the bend each spring is secured to the parting-bead K by a screw L or in any other suitable manner. One of the arms of the spring engages a special groove M, formed in the roller, while its other arm is so located that it is adapted to engage the top member of the upper sash B when the window is closed, as shown in Fig. 4. These springs tend to overcome the side pull of the chains, which tends to jam the sash by pulling it out of the perpendicular against the parting-beads. The brackets carrying the pulleys being secured to the side of the window-frame just brings the pulleys with their groove into line with the springs, which are secured to the parting-beads, as shown.

It will be shown that by my invention sashes may be held in any position desired and that without special labor or trouble.

What I claim as my invention is—

1. In a sash-lifter the combination, with brackets attached to the sides of a window-casing; pulleys journaled in said brackets and each provided with a special groove; and chains each connected to the upper sash and passing over said pulleys, of bent springs each secured to a parting-bead of the window-frame, and each provided with two arms, one engaging the groove in one of the pulleys and the other adapted to engage the

upper window - sash, substantially as described.

2. In a sash-lifter the combination, with a chain secured at one end to the upper sash, and a pulley over which the chain passes, suitably journaled at the upper part of the window-frame, of a bent spring secured to the window-frame and provided with two

arms, one engaging the pulley, and the other adapted to engage the upper window-sash, substantially as described.

Toronto, Ontario, August 29, 1906.

ROBERT WASHBURN.

In presence of—

A. S. BARE,

D. S. TOVELL.