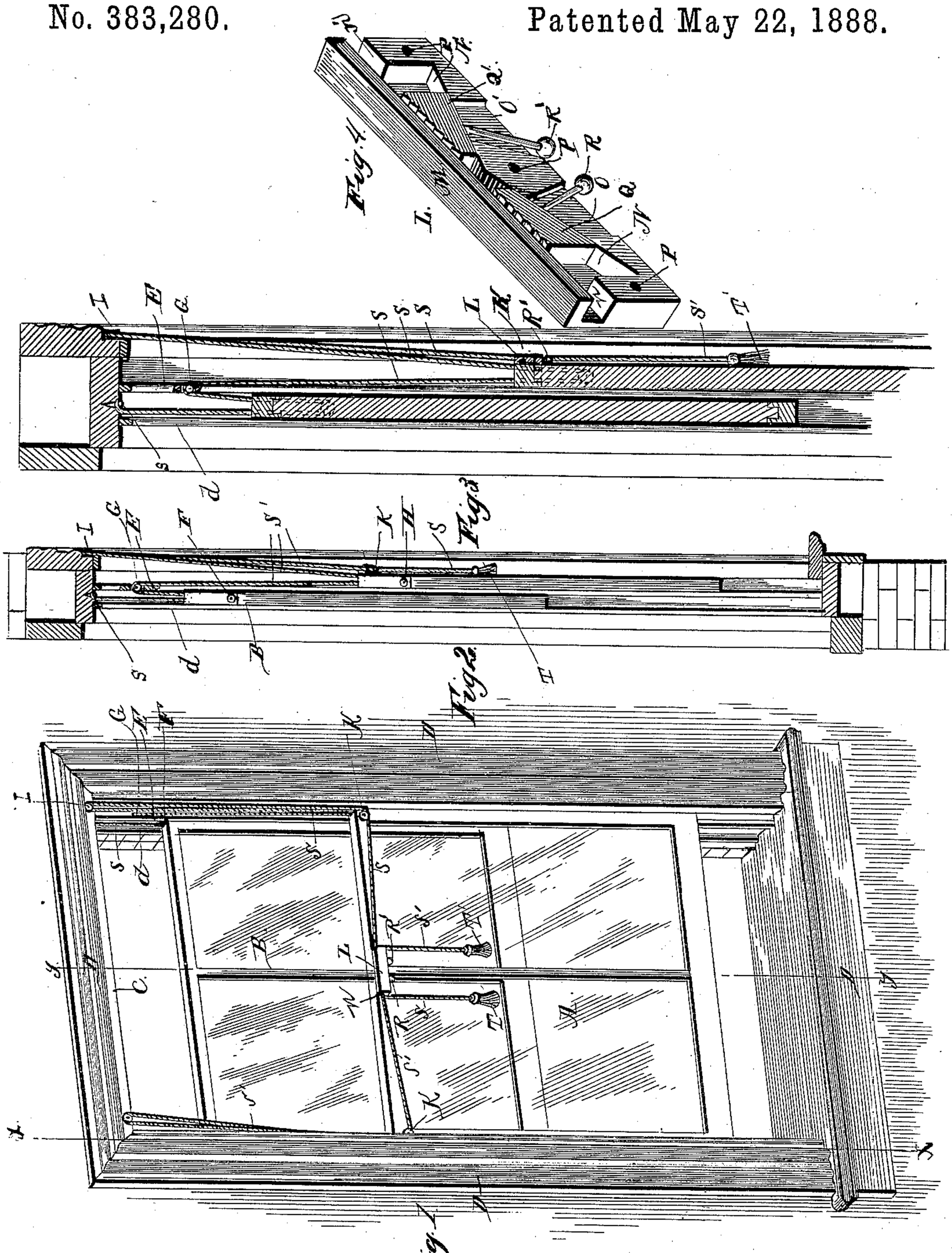
(No Model.)

J. H. CORSBIE.

SASH BALANCE.

No. 383,280. Patented May 22, 1888.



Witnesses.
Geo. Thorpe.
C. C. Dodge.

Inventor.
James H. Corsbie.
By his Attorneys
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JAMES HANCE CORSBIE, OF HARTSELL'S, ALABAMA, ASSIGNOR OF ONE-HALF TO MILTON J. SPEAKS, OF SAME PLACE.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 383,280, dated May 22, 1888.

Application filed July 16, 1887. Serial No. 244,522. (No model.)

To all whom it may concern:

Be it known that I, JAMES HANCE CORSBIE, a citizen of the United States, residing at Hartsell's, in the county of Morgan and State of Alabama, have invented a new and useful Improvement in Sash-Balances, of which the following is a specification.

My invention relates to an improvement in sash-balances; and it consists in a certain novel construction and arrangement of parts for service, clearly set forth hereinafter and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is perspective view of a window provided with my improved sash-balance. Fig. 2 is a section through the frame on the line *x x* of Fig. 1, showing the edges of the sashes in elevation. Fig. 3 is a section on line *y y* of Fig. 1. Fig. 4 is a detail view of the rear of the fastener.

Referring to the drawings, in which similar letters denote corresponding parts in all the figures, A is the lower and B the upper sash in the frame C, said frame having the usual inside molding, D, outside bead, *d*, and parting-bead E between the sashes.

F is a pulley secured to the edge of the upper sash, B, near the upper part. G is a pulley set in the parting-bead E. H is a pulley on the edge of the lower sash, A, near the upper end. I is a pulley secured on the inside of the frame, and K is a pulley secured on the face of the meeting-rail of the lower sash.

L represents the fastener secured to the meeting-rail of the lower sash, A, and consisting of a block, M, having the wedge-shaped recesses N N′ therein, said recesses being joined at their narrowest parts, and having the openings *n n′* in their wide ends.

O O′ are shallow recesses made in the lower portion of the block below the recesses N N′, for a purpose to be explained.

P are openings in the block for the reception of screws to fasten said block to the sash.

Q Q′ are wedges to operate in the recesses N N′, and having the serrated upper edges, said edges being straight to correspond with the straight upper wall of the recesses N N′.

R R′ are pins or handles secured in the lower side of the wedges Q Q′, and extending through the shallow recesses O O′, and projecting beyond the lower edge of the block M.

S represents a cord which is secured to the upper side of the frame of the window at the point *s*, and, passing under the pulley F on the upper sash, over the pulley G, under the pulley H on the lower sash, over the pulley I on the inside of the frame, and under the pulley K on the front of the lower sash, passes along the meeting or upper rail of the sash, and through the block-fastener L over the serrated wedges Q Q′. There is a duplicate set of pulleys on the opposite side of the window and placed in the same relative positions as the pulleys above mentioned. Passing around said duplicate set of pulleys in the same manner as the cord S passes around the pulleys F G H I K is a cord, S′, which also passes through the fastener L in the opposite direction to that taken by the said cord S. The cords S S′, after leaving the fastener L, hang down, as shown in Fig. 1, and are provided with the tassels T T′, which serve as handles.

The operation of my invention is as follows: When raised, the tendency of the upper sash is downward, and in order to descend the said upper sash must pull upon the cords S S′. This pull tends to draw the cords through the block M, but this is opposed by the wedges Q Q′, whose serrated upper edges engage the said cords and the action is to draw the wedges toward the center and smaller ends of the recesses N N′, thereby causing the said cords to be compressed tightly between the upper sides of the wedges and the top wall of the recesses N N′. This action on the part of the wedges prevents the descent of the upper sash, as will be understood. If it be desired to raise the lower sash and lower the upper sash at the same time, it is only necessary to lift the lower sash, as this will slacken the cord between the pulley K and the pulley I and allow the weight of the upper sash to cause the descent thereof. When both sashes are in their closed positions, to raise the lower sash pull the free ends of the cords S S′, and at the same time draw the handles which are attached to the wedges apart, thus freeing the cords from engagement. The cords now being free may be drawn through the fastener and around the pulley K. It will be readily seen that the said cords will remain stationary at the pulleys I, and the action will be to raise the said

lower sash by passing under the pulleys K. When the lower sash has reached the desired elevation and the cords are allowed to pass back through the block a short distance, the wedges will again clamp said cords and hold the sash in the new position.

To lower the upper sash, release the cords by drawing the wedges away from contact therewith and allow the weight of the upper sash to draw the cords through the fastener L. When the said sash is lowered to the desired point, release the wedges and the cords passing through the block will again cause the wedges to clamp the cord as before.

It will be understood that to release the cord from the wedges it is only necessary to draw said wedges apart by means of the pins or handles R R′. This removes the serrated upper edges of the wedges Q Q′ from contact with the cords S S′. It will now be understood that the cords cannot be drawn through the fastener in either direction without drawing the wedges apart, and thus releasing the cords from engagement—that is, when the tension is upon the main part of the cord (above the fastener) the wedge at the opposite end of the fastener engages therewith and prevents motion, and when the lower or free end of the cord is drawn upon the other wedge engages the cord.

The advantages gained by the construction and arrangement herein described are that either sash may be moved independently of the other, or both sashes may be moved in contrary directions at the same time, and as the upper and lower sashes counterbalance each other they will come to rest as soon as the operator ceases moving them, and allows the fastener to act on the cords.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a sash-balance, the combination, with the sashes having suitable pulleys thereon, of the fastener L, secured to one of the sashes and comprising the block M, having the wedge-shaped recesses N N′ therein, the openings *n n′* in the ends of the block and communicating with the said recesses, and the wedges Q Q′, arranged in the recesses N N′, and having serrated upper sides, and the cords S S′, operating around the said pulleys and passing through the openings *n n′*, and recesses N N′ in opposite directions over the said wedges, substantially as specified.

2. In a sash-balance, the combination, with the sashes having suitable pulleys arranged thereon, of the fastener L, comprising the block M, having the wedge-shaped recesses N N′, the end openings, *n n′*, and the shallow recesses O O′, communicating with the recesses N N′, and the serrated wedges Q Q′, operating in the recesses N N′, and having pins or handles R R′, operating in the recesses O O′, and the cords S S′, passing around the said pulleys and extending through the openings *n n′* in opposite directions, the said cords being adapted to be clamped within the block M by the wedges Q Q′, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES HANCE CORSBIE.

Witnesses:
JOHNSON B. WEST,
MILTON J. SPARKS.