J. B. RAYNER & E. G. BURR.

Sash-Balance and Lock.

No. 204,374. Patented May 28, 1878.

Fig 1

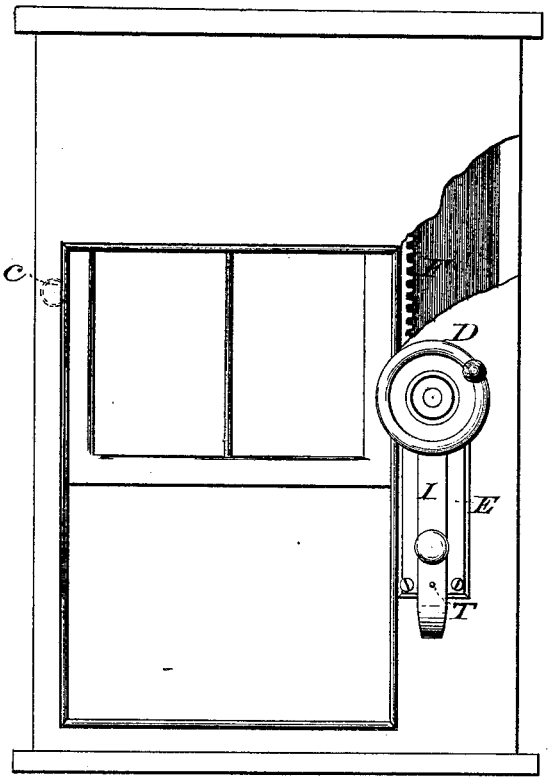


Fig 2

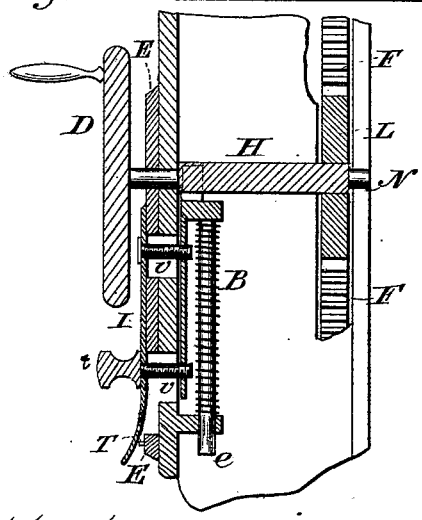
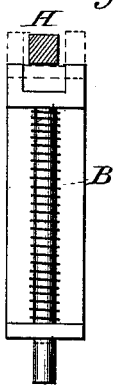


Fig 3



Attest:

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UNITED STATES PATENT OFFICE.

JOHN B. RAYNER AND EUGENE G. BURR, OF SPRINGFIELD, MASS.

IMPROVEMENT IN SASH BALANCE AND LOCK.

Specification forming part of Letters Patent No. **204,374**, dated May 28, 1878; application filed January 24, 1878.

To all whom it may concern:

Be it known that we, JOHN B. RAYNER and EUGENE G. BURR, both of Springfield, county of Hampden and Commonwealth of Massachusetts, have invented new and useful Improvements in Devices for Raising, Lowering, and Fastening Windows, Blinds, Screens, &c., of which the following is a specification:

The invention consists in the arrangement, in a sash-balance, of a bolt, thumb-piece, and spring, in combination with the other parts of a ratchet-and-pinion balance.

In the accompanying drawing, in which similar letters of reference indicate like parts, Figure 1 is a front view of a window and frame with the device attached. Fig. 2 is a side view of our invention, having parts in section; and Fig. 3 is a view of the locking-bolt.

We fasten a rack on either side of the frame to be moved, as shown at F, Fig. 1. We fasten the frame E to the side of the casing. The shaft H passes through the frame or plate E and pinion L, and rests in bearing N, the whole being placed so that the pinion L is in gear with rack F. On the end of shaft H we place crank-wheel D. The bolt B is secured in place by screws passing from the front, through spring I and slots *v v* in plate E, into bolt B. The head of the lower screw is made large enough to serve as a thumb-piece, *t*, for moving the bolt B. On plate E is pin T, which, when bolt B is drawn down, passes through spring I, and holds the bolt away from shaft H. Attached to bolt B is rod *e*, around which is a spiral spring.

To lock the sash, spring I is forced outward until it clears pin T, when the spiral spring on rod *e* forces the bolt upward against the shaft, at which point we make the shaft square, or of any convenient shape which may be held securely by the bolt. To prevent binding, we place friction-pulleys C, Fig. 1, on the side of the frame opposite the raising device.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a sash balance and lock, the frame E and spring-bolt B, having thumb-piece *t*, in combination with pinion L, shaft H, and rack F, arranged and operating substantially as shown.

2. The spring I, in combination with bolt B and frame E, having pin T, as and for the purpose set forth.

JOHN B. RAYNER.
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Witnesses:
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