W. CASHNER.

SASH-BALANCES.

No. 192,680. Patented July 3, 1877.

Fig. 1.

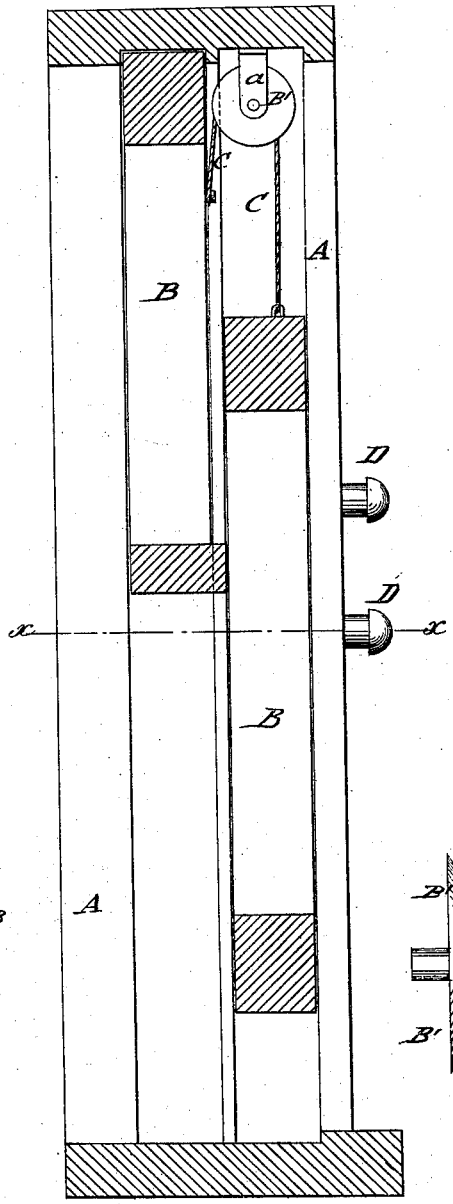


Fig. 2.

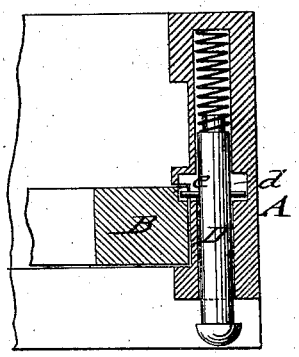


Fig. 4

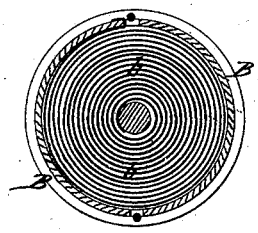
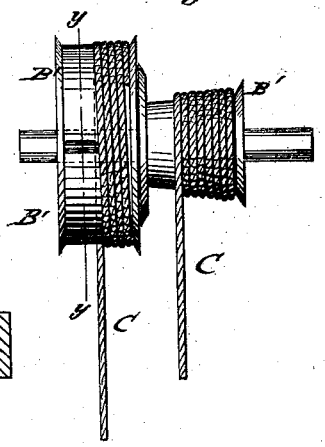


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE

WILLIAM CASHNER, OF PLEASANT HILL, MISSOURI.

IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. **192,680**, dated July 3, 1877; application filed June 4, 1877.

To all whom it may concern:

Be it known that I, WILLIAM CASHNER, of Pleasant Hill, in the county of Cass and State of Missouri, have invented a new and Improved Sash-Balance, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical section of a window with sashes and my improved sash-balance; Fig. 2, a detail horizontal section on line *x x* of the sash, and Figs. 3 and 4 are a detail side view and section of the spring-balance pulleys.

Similar letters of reference indicate corresponding parts.

The invention is intended to furnish an improved sash-balancing device which has the advantage of being confined into small space and hung at a more convenient place than the boxes, dispensing entirely with the boxes, weights, cords, and pulleys, and being also less expensive and easily adjusted for the weight of the sash than the same.

The invention consists of the sashes of a window hung by cords to double spring-pulleys, turning in opposite directions, and being retained in any position by sliding spring-bolts and pins acting on recesses of the sashes, as hereinafter more fully described and claimed.

In the drawing, A represents the window-casing, and B the sashes, which are hung, by cords C, to double spring-pulleys B′, whose shafts are supported at one end in socket-bearings of the window-casings, and at the other ends by pendent brackets *a*, screwed to the top part of the casing.

The balance-cords C are wound up in opposite directions on the double pulleys B′, one pulley being larger than the other, and the larger one provided at the interior with a coiled band-spring, *b*, of which one end is attached to the casing, the other to the shaft of the pulley. The spring is thereby called into action by either sash and wound up on lowering them, so as to assist in raising them.

A sliding spring-bolt, D, with cross-pin *d*, bears into recesses *e* of each sash, and secures the sash at different heights, by locking into the same. By pressing back the spring-bolt the sash is easily raised in connection with the balance-pulleys. Two balance-pulleys, one at each corner of the window-casing, are sufficient for ordinary sashes, while for heavy sashes a third pulley may be arranged in the center of the casing. The separating revolving sections of each double pulley B′ are operated by the same spring, as they are turned in opposite directions by the sash-cords. Thus a compact and cheap sash-balance is produced; or, instead of a third pulley, as stated above, a set of springs of heavier gage may be used.

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

1. As an improvement in sash-balancing devices, the combination of the sashes B, cords C, and double spring-pulleys B′, said cords winding in opposite directions on the separately-turning and spring-acted sections of the double pulleys, substantially in the manner and for the purpose set forth.

2. The combination of the spring-balanced sash, having side recesses, with the sliding and spring-acted bolt, having cross-pin locking into recesses of sash, for the purpose set forth.

WILLIAM CASHNER.

Witnesses:

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