

UNITED STATES PATENT OFFICE.

ADAM KOLB AND CHARLES OSBERGHAUS, OF SANDUSKY, OHIO.

IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. 189,107, dated April 3, 1877; application filed January 29, 1877.

To all whom it may concern:

Be it known that we, ADAM KOLB and CHARLES OSBERGHAUS, of Sandusky, in the county of Erie and State of Ohio, have invented a new and Improved Sash-Balance, of which the following is a specification:

Figure 1 is a side elevation of our improvement with portions removed to show the internal construction. Fig. 2 is a view of the under side of the part that attaches to the lower sash.

Similar letters of reference indicate corresponding parts.

The invention consists in combining, with pulleys, cord, and spring-clutch, a rod pivoted to the clutch, and passing through a hole in the casting, as hereinafter more fully described and definitely claimed.

Referring to the drawing, A is the upper sash, and B the lower sash, of a window. *a* is a pulley, attached to the upper portion of the window-casing, and *b* is a cord, attached to the upper rail of the upper sash by the fastening *c*, and running over the pulley *a*, and downward under a pulley, C, and over a pulley, *d*, both of which are journaled in a casting, D, attached to the upper rail of the lower sash.

E is a serrated clutch, that is pivoted at *e*, and provided with a spiral spring, *f*, that throws the serrated end of the clutch against the cord *b* at the point where it passes from the pulley C. F is a rod, pivoted to the clutch E at *g*, and extending through an aperture in the casting D, and provided with an eye, *h*, through which the cord *b* runs as it passes downward from the pulley *d*.

G is a bolt that slides in the lower portion of the casting D, and is provided with two notches, *i*, with either one of which the round-

ed part of the spring *j* may engage, so as to hold the bolt in either of its positions.

The fastening *c* consists of a concave socket cut away to receive the cord on its upper side, and provided with a point, *k*, projecting inward from the deepest portion of its concavity. This fastening is secured to the upper rail of the upper sash by two screws, and binds the end of the cord against the said rail.

The operation is as follows: When the bolt G is withdrawn the lower sash may be moved upward, when the upper sash will move downward, being supported by the cord *b*, the two sashes counterbalancing each other. If it is desired to lower the upper sash without raising the lower one, the free end of the cord *b* is drawn outward, thus drawing the clutch E away from the cord *b* by means of the rod F. The cord is, at the same time, permitted to pass through the eye *h* and between the pulleys C *d*, allowing the sash A to drop.

If it is desired to open the lower sash and allow the upper one to remain closed, the sash is raised and the cord pulled simultaneously. The clutch E engages the cord on releasing its free end.

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

The combination, with pulleys C *d*, cord *b*, and spring-clutch E, of the rod F, pivoted to the clutch, passing through a hole in casting D, and provided with an end eye, *h*, as and for the purpose specified.

ADAM KOLB.

CHARLES OSBERGHAUS.

Witnesses:

JACOB STORCK,

CHARLES GRAFTON.