

J. W. FOWLER & H. ADAM.

SASH-BALANCE.

No. 177,929.

Patented May 30, 1876.

Fig. 1.

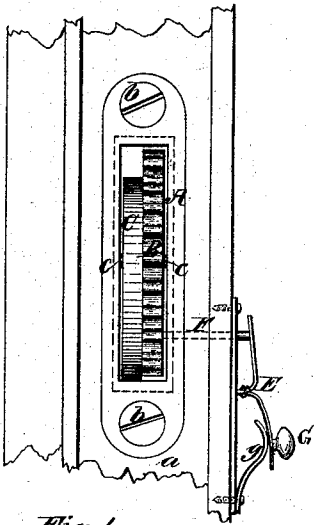


Fig. 2.

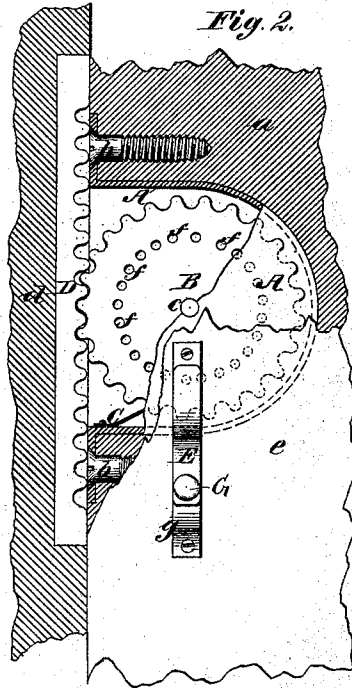


Fig. 4.

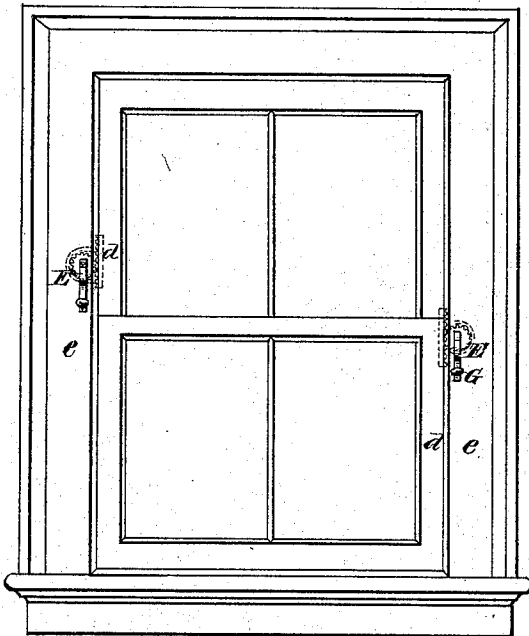
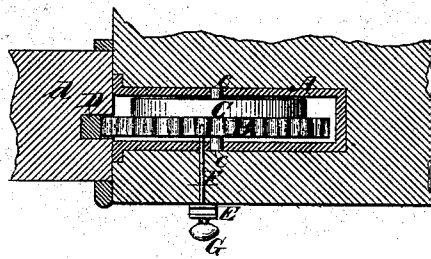


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH W. FOWLER AND HERMAN ADAM, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. 177,929, dated May 30, 1876; application filed April 12, 1876.

To all whom it may concern :

Be it known that we, JOSEPH W. FOWLER and HERMAN ADAM, both of Jersey City, in the county of Hudson and State of New Jersey, have invented a Sash Balance and Fastener for Raising and Lowering Window-Sashes and securely fastening the same, of which the following is a specification :

The invention consists in making a sash balance and fastener combined, to be made of iron or any other suitable metal, consisting of a cog-wheel and tape-spring arranged in a box or frame, the same being let into the window-jamb in such a position that the cogs or teeth shall project, so that they will work freely in a rack or ratchet, which is made with teeth similar to the cogs of the wheel, and which is let into the edge of the window-stile, so that, the cog-wheel working in the teeth of the rack, the sash can be raised or lowered at will by means of a spring-pin or key, which is attached to the window-casing, as will be hereinafter more fully described and definitely claimed.

We make the cog-wheel of any desired size, and with any number of teeth, having a circular ring of holes made in the same all round, and an equal distance apart, said holes being made and used for the purpose of stopping or locking the sash at any required position by means of a pin, which is used as a key, and which is placed on the inside of the window-casing, so that it shall come directly over the holes in the cog-wheel. It is made in such a way that by means of a spring arranged under the plate to which the pin or key is attached, but at the opposite end of same, the pin or key is always kept thrown forward in one of the holes, and consequently keeps the sash locked at any given point.

When it is required to raise the sash, it is only necessary to press upon a button or thumb-piece, which is attached to the plate that carries the pin, and placed directly over the spring, when the pin or key is drawn out, and the sash is raised for any distance—say, from one inch to the full height—the whole weight of the sash being carried or raised by the tape-spring, in connection with the cog-wheel and rack, the spring being made of any strength, according to the weight of the sash to be moved.

By this invention the sash-cord, pulleys, and weights ordinarily used can be dispensed with, and also the ordinary sash-locks, as the sash-balance also forms a good and secure fastening device, which cannot be unfastened from the outside of the window. The window-frames can also be made at less expense, as there are no pockets required to be made for sash-weights to work in.

In the accompanying drawing, Figure 1 is an elevation or front view of the sash-balance as let into the window-jamb, showing the cog-wheel and tape-spring, and also the spring-lock as attached to the casing. Fig. 2 is a view, partly in section and partly in elevation, showing section of the frame or box, the cog-wheel, with the holes round the same, and also the end of the tape-spring as fastened by a screw or otherwise to the inside bottom of the box; it also shows the rack or ratchet as let into the window-stile, and the spring-lock or fastener as attached to the casing. Fig. 3 is a cross-section, showing the shape of the box or frame, and also shows the lock-pin, &c. Fig. 4 is the inside elevation of a window, showing the elevator and lock as in position.

Similar letters of reference indicate corresponding parts of all figures.

A is the frame or box, which is let into the window-jamb *a*, and held in its place by means of the screws *b b*. B is the cog-wheel, which, with the tape-spring C, is made to work on the pin *c c*. D is the rack or ratchet, which is let into the stile *d*, and held in position by screws or otherwise. E is the spring-fastener, which is attached to the casing *e*. F is the key or pin, which is placed directly over, and made to work through, a hole made for the purpose in the casing, and into the lock-holes *f* in the cog-wheel, and by pressing on the thumb-piece or button G on the fastener, and pushing down the spring *g*, the key or pin is drawn out from the hole *f*, and the bottom sash will be made to rise up, and the upper one to work down.

We do not broadly claim the use of a spring-actuated cog-wheel, a rack, and fastening-pin. We are aware these have heretofore been used in sash-balances; but,

Having fully described our own improvement thereon, what we claim as new, and desire to secure by Letters Patent, is—

An improved sash-balance, consisting of the

metal frame or case A, the cog-wheel B, chambered to contain a suitable spring, *g*, and having on its side a series of lock-holes, *f*, the rack D, and the tape-spring S, in combination with the spring-fastener E, attached to the outside of the casing, and having a pin or key, F, automatically engaging with the lock-holes

of the cog-wheel, all substantially as described and shown, for the purpose specified.

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Witnesses:

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