C. MESSENGER.

Sash-Balance.

No. 198,896. Patented Jan. 1, 1878.

Fig. 1.

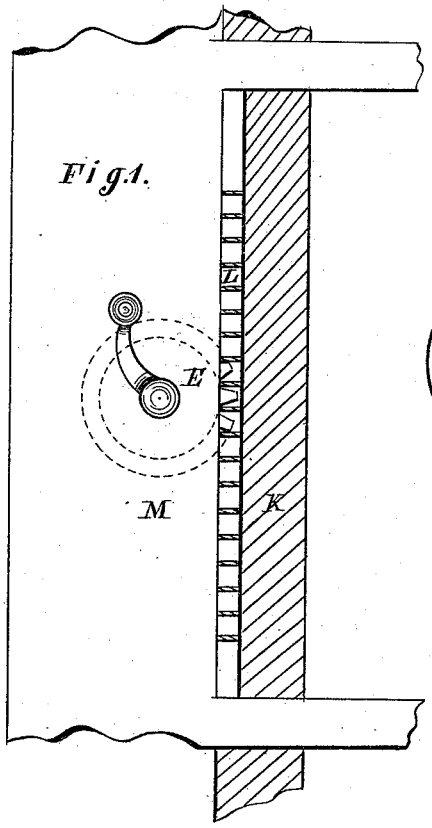


Fig. 2.

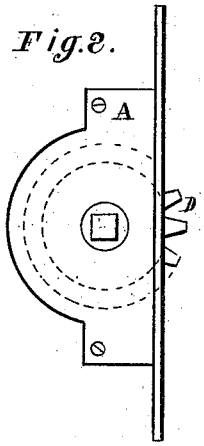


Fig. 3.

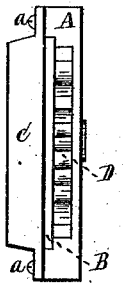


Fig. 4

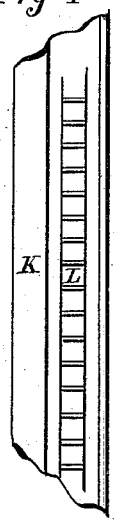


Fig. 5.

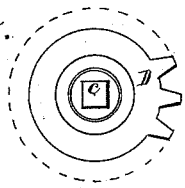


Fig. 6.

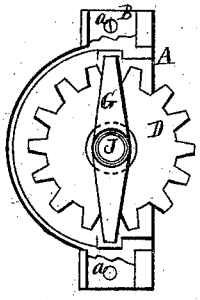
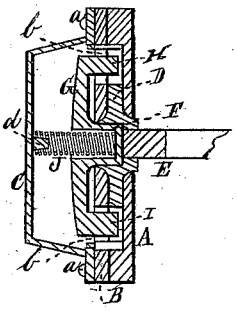


Fig. 7.



Witnesses.

H. Ayers

W. H. Kennedy

Inventor.

C. Messenger.

Per Burridge & Co.

Attys.

UNITED STATES PATENT OFFICE.

CHARLES MESSENGER, OF CLEVELAND, OHIO.

IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. **198,896**, dated January 1, 1878; application filed September 17, 1877.

To all whom it may concern:

Be it known that I, CHARLES MESSENGER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Sash-Locks, of which the following is a description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of a section of a window frame and sash having applied thereto the lock. Figs. 2 and 3 are detached views of the lock. Figs. 4, 5, and 6 are detached sections, and Fig. 7 is a transverse section of the lock.

Like letters of reference refer to like parts in the several views shown.

This invention relates to sash locks or fasteners and sash-balances; and the object thereof is to prevent the sash, when drawn, from being raised, and also to provide means by which the sash may be raised or lowered and secured at any desirable height.

The invention in part consists of a toothed wheel working in a rack attached to the sash, which toothed wheel, on being revolved by a key, raises or lowers the sash, and the sash is locked when down, or held up when raised, by a spring-check arranged to engage the teeth of said wheel, substantially as hereinafter more fully described and claimed.

Figs. 2 and 3 represent different views of the lock, and which consists of two sections, A and B, forming a case or shell, of which B is the side piece or cover, secured thereto by screws *a a*, which also connect to the case a shell, C, Fig. 7. In the case alluded to is a toothed wheel, D, Fig. 6, the hub of which has its bearings in the sides of the case. In one end of the hub is a square hole, *c*, Figs. 2 and 5, for the admission of the key E, whereby the wheel is revolved. In the opposite end of the hub is a circular hole, wherein is fitted the boss F of the check G, and whereby the check is held in its respective relation to the wheel.

From each end of the check projects a finger, H and I, respectively, as shown in Fig. 7, the length of said fingers being sufficient to extend through the plate B into the case between the teeth of the wheel, as seen in said Fig. 7, wherein it will be observed that slots *b* are made in the plate for the admission of the fingers, the check being on the outside of the plate, and inclosed by the shell C above referred to.

Fig. 6 represents a view of the check in its relation to the wheel. The plate B is shown as broken away that the check and wheel may be seen.

The boss of the check is hollow, and therein is placed one end of a spring, J. The opposite end of the spring rests against the back of the shell C, and is held in place by a nib, *d*, Fig. 7. The tension of the spring holds the check in its engagement with the teeth of the wheel, thereby preventing said wheel from turning, and which it cannot be until forced back from the teeth of the wheel by the key F.

In Fig. 4, K represents one side of a window-sash, in the edge of which is sunk a rack, L, flush with the wood, and into which rack the teeth of the wheel project, as shown in Fig. 1. Said wheel, or, rather, the case inclosing the wheel, is let into the side of the window-frame M so far as to allow the teeth of the wheel to project and engage the rack L, as shown in Fig. 1. A key-hole is made in the side of the frame for the admission of the key to the wheel.

In order to raise and lower the sash, the key is inserted in the key-hole, and strongly forced therein against the boss F of the check forming the bottom of the hole. This pushing in of the key forces back from its engagement with the wheel the check, which will permit the wheel to turn, so that the sash can be raised or lowered by means of the key actuating the wheel; or it may be moved by the hand, and which may be locked at any height by the check on releasing the pressure upon the key, which will allow the check to engage the wheel, it being forced forward into the wheel by the reaction of the spring J, which prevents the wheel from turning, and consequently prevents the sash from being raised or lowered, as the teeth of the wheel are held in the rack, as shown in Fig. 1, and which

wheel cannot turn in consequence of its engagement with the check, as aforesaid.

What I claim as my invention, and desire to secure by Letters Patent, is—

The toothed wheel D, check G, spring J, and the shell or case herein described, in combination with the rack L, arranged in relation to a window frame and sash, and operated by a key, substantially in the manner as set forth, and for the purposes specified.

CHARLES MESSENGER.

Witnesses:
W. H. BURRIDGE,
PHILIP ALLEMAN.