



# United States Patent Office.

FRANCIS ZELL, OF LOUISVILLE, KENTUCKY.

Letters Patent No. 79,046, dated June 16, 1868.

## IMPROVEMENT IN SASH-FASTENER.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANCIS ZELL, of the city of Louisville, and in the county of Jefferson, and State of Kentucky, have invented a new and useful Improvement in Window-Sash Locks; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 is a section of the upper and lower parts of a pair of window-sashes with my invention applied.

Figure 2 is a similar view, showing the position of the parts when the lower sash is raised or the upper sash lowered.

Figure 3 is a longitudinal section of the lock or fastening.

Figure 4 is an under side view of the lock or fastening.

Figure 5 is a front elevation of the socket.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to provide a self-closing sash-lock, whose bolt shall, when retracted from its socket, maintain its retracted position of itself, without requiring to be so held by hand, thus facilitating the raising or lowering of the sash.

In the drawings, A may represent the upper part of a lower window-sash, and A' the lower part of its mate. B is a bolt, fitted to slide to a limited extent in the case B', which is screwed to one of the sashes. The socket C, which receives the bolt B, in order to lock the two sashes together, is screwed or otherwise suitably fastened to the other sash.

The enlarged portion of the bolt B, which enters the socket C, is formed with a longitudinal groove or recess, which is occupied by a spring, D, which is made fast at one end to the bolt B.

When the bolt B is retracted to the position shown in fig. 2, the projection *d* of the spring D is caused by the resilience of the latter to enter the aperture *b* in the case B, and the bolt is thus retained in its retracted position, affording ample time to raise or lower the sash without the necessity of maintaining the retracted position of the bolt by hand. The projection *d* has slight longitudinal play in the aperture *b*, so that when the projection *d'* on the end of the spring D is relieved from contact with the socket-plate *c* by the slight upward or downward movement of one of the sashes, the bolt, together with the spring D, is projected a little way beyond the end of the case B, as shown in fig. 2. When the sashes are brought to the closed position in which they are shown in fig. 1, the projection *d'*, on the forward extremity of the spring D, comes in contact with the projecting part *c* of the socket-plate, and the spring D being thereby raised sufficiently to withdraw the projection *d* from the aperture *b*, the bolt B is thrown into the socket C by the action of the spring E, which encircles the smaller part of the bolt B, and is enclosed within the case B'.

From the above it is obvious that my sash-lock possesses important features, namely, the bolt, when once retracted, will not again spring into the socket until one of the sashes has been raised and lowered, or *vice versa*, sufficiently to actuate the spring D, and secondly, the bolt will invariably spring into the socket when the sash is closed.

The bolt B may be retracted by means of a common stud projecting through a longitudinal slot in the case, but I prefer to use a pivoted handle, F, as shown in the drawings. When the sashes are closed, and the bolt is in the socket, the gravitating movement of the handle F causes the projection or finger *f* to take into the aperture *b'* of the case B'. This contrivance prevents the bolt B from being pushed out of the socket C from the outside.

*e' e'* are inclines or sloping shoulders at the opposite sides of the entrance to the socket. If the sashes are out of line, or loosely fitted in the window-frame, these inclines will guide the projecting end of the bolt B to the mouth or entrance of the socket, so that when the spring D is raised, the bolt will invariably enter the socket.

I do not propose to limit the application of this lock or fastening to window-sashes, or to any other special use. It may be applied to doors, shutters, and drawers, and, in fact, wherever a spring-bolt is desirable.

I also propose to apply the additional spring D, either externally or internally, and in any manner that will secure the result hereinbefore maintained.

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

1. The spring D, so attached to the spring-bolt B, that when the latter is retracted it shall be retained in its retracted position, but be partially projected from its casing by the movement of the sash, so as to be brought against a projection, released, and thrown into the socket when the sash is closed, substantially as and for the purpose set forth.

2. The pivoted handle F, provided with a projection or finger, *f*, for locking the bolt, and operating in the manner and for the purpose explained.

To the above, I have signed my name, this 1st day of May, 1868.

FRANCIS ZELL.

Witnesses:

JOHN A. WIEDERSHEIM,  
JACOB F. HENRY.