

G. Warren. Sliding Sash.

N^o 81850

Patented Sept. 1, 1868.

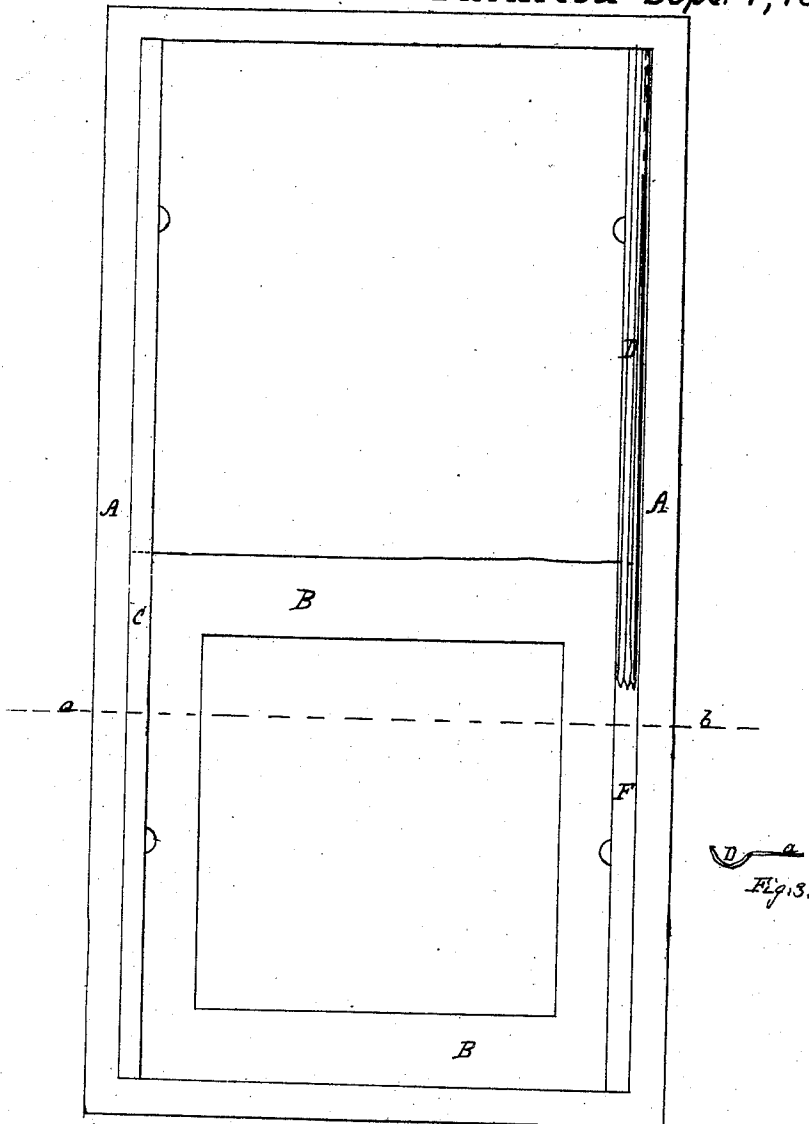


Fig. 1.

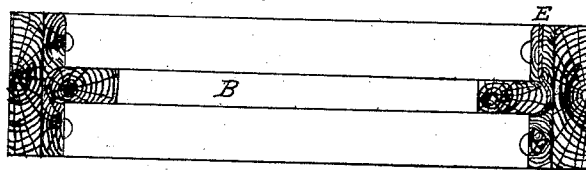


Fig. 2.

Witnesses

N. C. Lombard.

C. A. Jordan

Gardner Warren Inventor

United States Patent Office.

GARDNER WARREN, OF BOSTON, ASSIGNOR TO WILLIAM M. BYRNES, OF CHARLESTOWN, MASSACHUSETTS.

Letters Patent No. 81,850, dated September 1, 1868.

IMPROVEMENT IN SLIDING SASH.

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, GARDNER WARREN, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Device or Fixture to be Attached to Sliding Windows, Doors, and Blinds; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an elevation of a window-frame and sash embodying my invention.

Figure 2 is a horizontal section on line *a b* on fig. 1.

Figure 3 is an end view of the compensating-spring.

It is a well-known fact that sliding windows, doors, and blinds are subject to great changes consequent upon changes in the atmosphere, so that windows fitted up in the usual manner are very loose in warm, dry weather, so that dust in large quantities finds its way into the house; and also in dry, cold weather in the winter the windows rattle, and the cold air finds its way very readily into the house; but a few days or even hours of wet weather will swell them so tight that it is almost impossible to raise or lower them till dry weather again appears.

To meet this difficulty and remedy these evils is the object of my invention; and it consists in applying to an ordinary window-frame, what I call a compensating-spring, made of metal, the form of which I make as shown in figs. 2 and 3, as being preferable, though it may be made of various forms.

This spring should extend the whole height of the window-frame in cases where the sash has a movement equal to the height of the sash in the frame, or, in other words, the spring in all cases should have a length equal to the height of the sash and the length of its movement combined.

In the drawings, *A A* represent the jambs of an ordinary window-frame; *B* is the sash, with its two vertical edges worked to a half circle or nearly so; *C C* are stop-beads, screwed to the frame, and so shaped that when in position, they form a semicircular groove for the sash to slide in. The other edge of the sash slides in a semicircular groove formed in the spring *D*. The spring *D* is attached to the frame by means of the straight lip or flange *a*. The stop-bead *E* is split into two pieces, and the lip of the spring placed between them, and the whole is then screwed to the frame in such a manner as to leave sufficient space between the curved portion of the spring and the jamb of the frame, to allow for all swelling that will be likely to occur. The stop *F* must be so fitted as not to interfere with the free action of the spring *D*.

I have described my invention as being applied to a window in which the sash moves vertically, but I wish it to be understood that I do not confine myself to such application, for I think it is evident that it may be applied to a window, door, or blind when they are made to slide, whether vertically or horizontally. It may also be reversed, and attached to the sash, door, or blind.

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

The metallic spring *D* with the flange *a*, when constructed and applied substantially as described, and for the purposes set forth.

Executed at Boston, this 10th day of January, 1868.

GARDNER WARREN,

Witnesses:

N. C. LOMBARD,
C. A. JORDAN.