

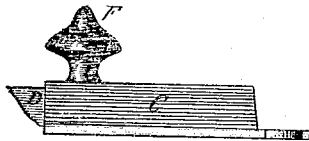
W. E. Sparks

Spring Bolt

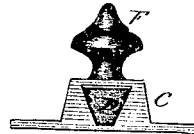
No. 111,693.

Patented Feb. 7. 1871.

- Fig. 1 -



- Fig. 2 -



- Fig. 3 -

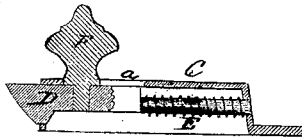
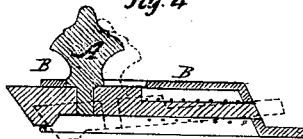


Fig. 4



Witnesses

J. H. Shumway  
A. J. Tibbitts

William E. Sparks  
Inventor

By John E. Earle  
Attorney

# United States Patent Office.

WILLIAM E. SPARKS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO  
SARGENT & CO., OF SAME PLACE.

Letters Patent No. 111,693, dated February 7, 1871.

## IMPROVEMENT IN SPRING-BOLTS.

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, WILLIAM E. SPARKS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Spring-Bolts; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1, a side view;  
Figure 2, an end view;  
Figure 3, a longitudinal central section; and in  
Figure 4, a sectional view, to more fully illustrate my invention.

This invention relates to an improvement in that class of bolts commonly called spring-bolts or cupboard-latches, that is, a latch-bolt with a beveled nose, combined with a spring to throw the bolt from the case, and a knob fixed to the bolt, by means of which it is drawn into the case.

Heretofore these bolts have been constructed with a knob extending through a slot in the case and fixed to the bolt, the base of the knob being of larger diameter than the width of the slot, and bearing upon the surface of the case to sustain the bolt in its position. This constant rubbing of the knob upon the case soon disfigures the surface of the case, a difficulty which, by my invention, is entirely overcome.

To more fully illustrate my improvement I show in fig. 4 a sectional view of a bolt of common construction, in which it will be observed that the knob A necessarily bears upon the surface of the case B; for, if it did not, as the bolt was drawn back the bevel of the nose would allow the bolt to drop, as denoted in broken lines; hence the entire support of the bolt is

dependent upon the base of the knob bearing upon the outside surface of the case.

My invention consists in constructing the bolt with the two sides inclined inward, making the inside of the bolt narrower than the outside, and the bolt-opening in the case of the same form, whereby the bolt, in whatever position, will take its bearing in the opening through the case.

C is the case, and may be of any of the usual forms of construction, and provided with the usual means for securing to the door.

D, the bolt, is beveled in the usual manner, but is formed with inclined sides, as seen in fig. 2, making it narrower upon the lower or inside.

The bolt is provided with a spring, E, to force it forward, also in the usual manner.

Through a slot, *a*, in the case a knob, F, is set into the bolt D, without any bearing surface upon the case, and, when the bolt is drawn in to its fullest extent, the widest portion still rests in the opening through the case, and, in consequence of the inclined sides of the opening, cannot fall from that position, thus making the bolt self-supporting.

If desirable, the base of the knob may be enlarged so as to cover the slot in the case, and this without coming in contact with the case.

I claim as my invention—

In spring-bolts or latches, the bolt D, constructed with inwardly-inclined sides, and the case with a corresponding opening to form a bearing for the bolt, to support it in drawing or when drawn into the case, substantially in the manner and for the purpose set forth.

Witnesses:

WILLIAM E. SPARKS.

J. H. SHUMWAY,

A. J. TIBBITS.