O. S. JUDD.

SASH-FASTENERS.

No. 194,825. Patented Sept. 4, 1877.

Fig. 1.

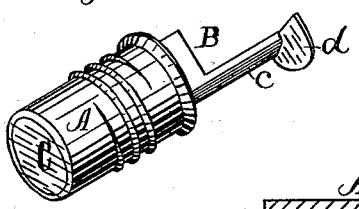

Fig. 2.

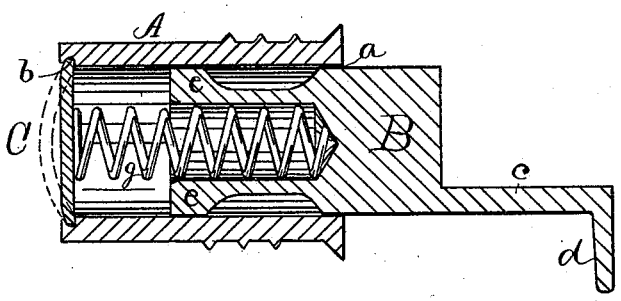

Fig. 3.

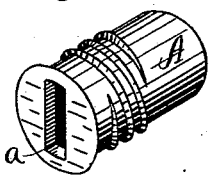

Fig. 4.

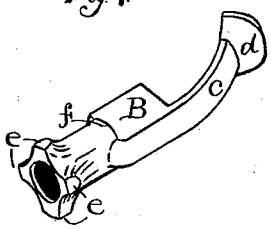

Fig. 5.

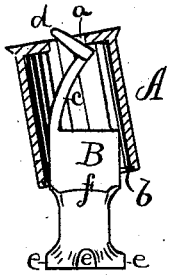

Fig. 6.

Witnesses.

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OLIVER S. JUDD, OF NEW BRITAIN, CONNECTICUT.

IMPROVEMENT IN SASH-FASTENERS.

Specification forming part of Letters Patent No. **194,825**, dated September 4, 1877; application filed June 30, 1877.

To all whom it may concern:

Be it known that I, OLIVER S. JUDD, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Window-Springs, of which the following is a specification:

My invention is designed for that class of window-springs or sash-fasteners which are attached to the frame of the window, and provided with a sliding bolt which engages with notches made in the sash, the bolt being thrown into engagement with the sash by a spring, and out of engagement by pressure on a thumb-pad, the same being a very old and well-known class of spring.

My invention consists in the novel and peculiar construction of certain parts; in the combination of these and other parts; and in the peculiar manner of getting the parts together, all as hereinafter more fully described and claimed.

In the accompanying drawing, Figure 1 is a perspective view of a window-spring which embodies my invention. Fig. 2 is a horizontal and longitudinal section through the middle of the same on an enlarged scale; and Figs. 3, 4, 5, and 6 are views of detached parts.

A designates the case or shell, provided at its front or outer end with a rectangular orifice, *a*, (most clearly shown in Fig. 2,) the same being a perspective view of said case detached. This case is cylindrical in form, and, if desired, may be provided with a peripheral screw-thread, or a portion thereof; but the manner of securing it within the window-frame is no part of my invention. The interior of the case is also cylindrical, and when first constructed is made open at its rear end for the full size of its interior. Near the rear end of the interior side walls of this case there is an annular recess, *b*, Figs. 2 and 5, for a purpose hereinafter described. The bolt B, at its front or outer end, is of the ordinary form, having arm *c* and thumb-pad *d;* but when first cast it is made with the arm and thumb-pad turned to one side, as shown in Figs. 4 and 5, which, when all the parts are in place, or when the bolt is in place in the case, is straightened into the form shown in Figs. 1 and 2, the material being sufficiently ductile to enable it to be thus straightened.

The inner end of the bolt B, unlike any prior bolts in this class of window-springs that I know of, is adapted to operate wholly within the case A, having no part whatever which in any way protrudes either wholly or partially through the case, except through the orifice *a* at the front. This inner end of the bolt has four radial arms, *e*, (three would answer as well,) which take their bearings on the interior walls of the case, while the rectangular body of the bolt B bears on the side walls of the orifice *a*, whereby the bolt is supported at each end, and may be moved endwise within the case on said supports.

Just below or inside of the rectangular body of the bolt B there are two shoulders, *f*, Figs. 4 and 5, one on each side, the same enlarging the bolt at that point to such an extent that the shoulders cannot be passed through the orifice *a*.

Within the inner end of the bolt B there is a recess or cavity for the reception of an ordinary spiral spring, *g*, Fig. 1. This spring-cavity is also shown in the perspective view of the bolt, Fig. 4.

As before stated, the shoulders *f* enlarge the bolt so that it cannot pass through the orifice *a*. One shoulder can be made to answer the same purpose. The arms *e* also enlarge the inner end of the bolt so that it cannot be inserted through the front end, as in other window-springs of this class. For this reason the rear end of the case is left open and the arm *c* bent so that the bolt may be inserted from the rear, as shown in Fig. 5, which is a sectional view of the case and a side elevation of the bolt, the same being represented with the thumb-pad of the bolt passing through the orifice *a*, which is so small that even the thumb-pad has to be passed through corner-wise, and that only when in one position. When the bolt has been pushed in a little farther, and while the arm *c* is still in the orifice *a*, the bolt is given a quarter-turn to make it coincide with the orifice *a*, when the bolt can readily be passed through and stopped by the shoulders *f* in the position shown in Figs. 1 and 2, and the arm *c* is then straightened, as shown in said figures. The spring is then

inserted, and the disk-bottom, (shown in sectional view, Fig. 6), which is made somewhat dishing, as also indicated by broken lines in Fig. 2, is then put in, with its edges resting in the annular recess *b*, when said disk is flattened, as shown in Figs. 1 and 2, thereby expanding its diameter and firmly forcing its edges into the annular recess beyond all liability of accidental displacement.

The bolt is forced into the case by pressure on the thumb-pad *d*, and out of the case by means of the spiral spring, the shoulders *f*, by engagement with the interior of the front end of the case, preventing its shooting too far out at that end; and the rear end of the bolt, by engagement with the flattened disk, preventing the bolt from being depressed so far as to bring the coils of the spring together to the injury of the spring.

I claim as my invention—

1. A window-spring of the class described, in which the case A C, when completed, is wholly closed, except at a single orifice at its front, through which the bolt protrudes, substantially as described, and for the purpose specified.

2. In a window-spring of the class described, the case A, having at annular recess, *b*, at its rear end, in combination with the flattened disk C, for closing the rear end of said case, substantially in the manner described, and for the purpose specified.

3. In a window-spring, the bolt B, having the ordinary thumb-pad *d*, arm *c*, and rectangular body at its outer end, and its inner end enlarged to fit the cylindrical interior walls of the case, substantially as described, and for the purpose specified.

4. In a window-spring, the combination of bolt B *f e*, spring *g*, case A, having annular recess *b*, and the flattened disk C, substantially as described, and for the purpose specified.

OLIVER S. JUDD.

Witnesses:

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