C. W. PENFIELD.
Sash Fastener.

No. 201,942. Patented April 2, 1878.

Fig 1.

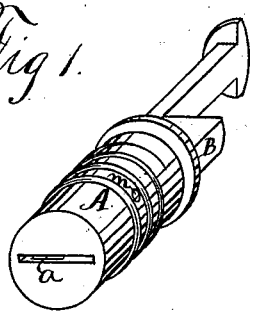


Fig. 2.

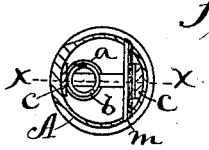
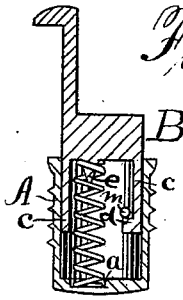


Fig. 3.



Witnesses.
W. B. Thomson
L. S. Burr

Inventor.
Charles W. Penfield
By James Shepard Atty.

UNITED STATES PATENT OFFICE.

CHARLES W. PENFIELD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P. & F. CORBIN, OF SAME PLACE.

IMPROVEMENT IN SASH-FASTENERS.

Specification forming part of Letters Patent No. **201,942**, dated April 2, 1878; application filed January 30, 1878.

To all whom it may concern:

Be it known that I, CHARLES W. PENFIELD, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Sash-Fasteners, of which the following is a specification:

My invention consists in the bolt having arms fitted to the inner walls of the case, and projecting laterally no farther than the body of said bolt, one of which arms has a shoulder on its inside face, in combination with the pin, spring, and case, as hereinafter more fully described and claimed.

Prior to my invention the class of sash-fasteners shown in my drawings, consisting of a frame, sliding thumb-bolt, and a spring, was old; and more recently this old style of bolt has been put into a cylindrical case, sometimes screw-threaded, sometimes plain, and sometimes having small nibs or projections on its sides. The bolt in this style of fasteners has sometimes been made with two arms, having shoulders on the outside of said arms, acting directly upon the case to act as a stop for the bolt; but this bolt had to be malleable, so as to allow of bending the arms into place, and when in proper working position, the projection of the arms extended beyond the edges of the body of the bolt. A transverse pin through the case is also old when the case is cast in halves, the pin being for the purpose of holding the two halves of the case together; but, so far as I know, said transverse pin has not been located in the path of a shoulder formed on the inside of one arm of a bifurcated bolt, so as to engage said inside shoulder and act as a stop for the bolt, as hereinafter described. All of the foregoing old devices are hereby disclaimed.

In the accompanying drawings, Figure 1 is a perspective view of a window-spring which embodies my invention. Fig. 2 is a transverse section of the same, and Fig. 3 is a longitudinal section thereof on line *x x* of Fig. 2.

A designates the cylindrical case, which may be provided with screw-threads on its periphery, or other means provided for securing it to the window-frame. This case is provided at its outer end with an oblong hole, in which the body of the bolt plays. The longest sides of this hole are straight and parallel, and the ends of said hole are concave, and are flush with the inner cylindrical walls of the case. Preferably a hole is left at the inner end of the case to facilitate casting.

Upon the inner end or bottom of the case there is a shallow socket, *a*, on the inside, to receive and govern the lower end of the spiral spring *b*. The bolt B, so far as it protrudes from the case, is of substantially the ordinary form. Its edges are, however, convex, to conform to the concave ends of the oblong hole in the case. On the inner end of this bolt are two arms, *c c*, which, except on their confronting faces, are a continuation of the four sides of the body of the bolt, and are flush therewith, by means of which construction they may be passed through the oblong hole and into the inner bore of the case which matches the concave ends of said hole. It is essential, therefore, that these arms *c c* shall not be wider than the width of the oblong hole, or project in either direction laterally beyond the body of the bolt; otherwise they could not be inserted through the oblong hole which fits the body of the bolt. These convex edges of the bolt and its arms, resting on the interior concave walls of the case, guide the bolt in its longitudinal reciprocation and firmly support the same.

If desired, shallow longitudinal grooves might be made upon the inner walls of the case for the arms of the bolt to play in; but it is believed that the concave walls of the case and convex edges of the bolt will furnish all necessary support for guiding the bolt.

Upon one of the arms *c* there is a shoulder, *d*, formed on its inside face, and on the body of the bolt, between said arms, is a small stud, *e*.

To put the parts together, the spring *b* is inserted in the case with its lower end resting in the shallow socket *a* formed especially to receive said spring. The bolt B is then placed in the case with its arms resting against the internal walls thereof, and the stud *e* taking into the end coil of the upper end of spring *b*. A small transverse pin, *m*, is then passed through holes made to receive it in the case, at such a point as to engage the shoulder *d* on the inside face of the arm *c* when the bolt B is in its most extended position, and prevent it from being wholly withdrawn from the case.

By the peculiar construction above described, no part of the bolt requires bending or upsetting in order to secure it in place, and therefore the same may be made of the common gray iron instead of brass or malleable iron. The case A, with its bolt-hole, internal walls, spring-socket, and holes for the pin *m*, may be all cast on a core.

I claim as my invention—

The bolt B, having arms *c c* fitted to the inner walls of the case, and projecting laterally no farther than the body of said bolt, one of which arms has the shoulder *d* on its inside face, in combination with the transverse pin *m*, spring *b*, and the case A, having spring-socket *a*, all substantially as described, and for the purpose specified.

CHARLES W. PENFIELD.

Witnesses:
JAMES SHEPARD,
WILL. B. THOMSON.