J. C. KNOEPPEL.
Shutter Fastenings.

No. 200,921. Patented March 5, 1878.

Fig. 1.

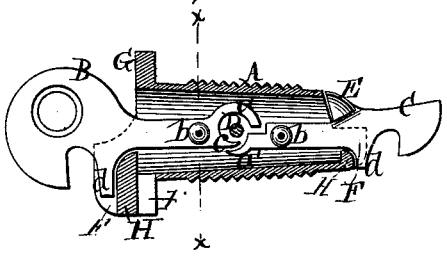


Fig. 2.

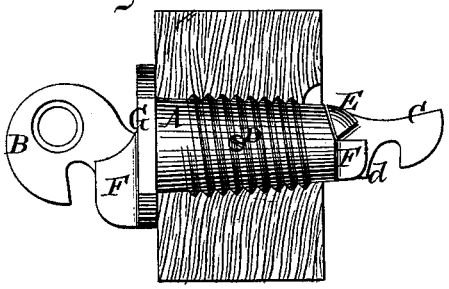


Fig. 3.

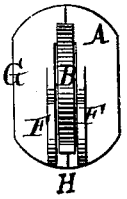
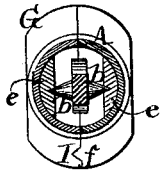


Fig. 4.



Witnesses.
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C. H. Duell

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UNITED STATES PATENT OFFICE.

JOHN C. KNOEPPEL, OF NEW YORK, N. Y.

IMPROVEMENT IN SHUTTER-FASTENINGS.

Specification forming part of Letters Patent No. **200,921**, dated March 5, 1878; application filed September 7, 1877.

To all whom it may concern:

Be it known that I, JOHN C. KNOEPPEL, of New York city, in the county of New York and State of New York, have invented a new and useful Improvement in Shutter-Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improved shutter-fastener that works easily and effectively, without the use of springs, by the weight or gravity of the fastening-hooks, prevents the rattling and shaking of shutters, cannot be opened from the outside, and is so arranged as to prevent the entrance of water into the cylinder when the shutter is closed, and to allow the water to escape when the shutter is open.

My invention consists in so forming the rear points of the fastening-hooks that they admit the passage of the rivet without its interfering with their swinging motion, and without passing through the fastening-hooks, these rear points of the fastening-hooks being nearly circular in form, thereby preventing the fastener from becoming useless in case either of the rear curved points of the fastening-hooks were to break; also, in providing the face parts of the cylinder with rests and guards of peculiar construction, into which the fastening-hooks fit, the fastening-hooks being formed with downwardly-projecting spurs or stops, which fit into the rests and guards formed on the face parts of the case or cylinder.

My invention further consists in casting a cap upon the outer fastening-hook, and also in cutting an opening or recess at the lower end of the inner flange or face of the cylinder, for the purpose of preventing water from entering the cylinder, all as hereinafter more fully described and claimed.

Figure 1 is a side elevation, with part of the shell or cylinder taken off. Fig. 2 is a side view of my improved shutter-fastener. Fig. 3 is an end view, and Fig. 4 is a vertical transverse section taken on the line *x x* of Fig. 1.

In the drawing, A represents the cylinder or shell, which is made of two symmetrical sections, divided vertically in the direction of the longitudinal axis, having rests H H and guards F F on the face ends, the two halves being connected by a lateral rivet, D.

The fastening-hooks B and C lock by their own weight, and have downward-projecting spurs or stops *d d* fitting and resting in a recess formed by the guards F F, to produce the instant locking of the hooks, prevent rattling of the shutters, and any disarrangement of the pivots *b b* on which the hooks B and C swing.

The cylinder is slightly tapering and screw-threaded on the outside, to be securely turned in a hole bored in the shutter to secure the fastener. The inner end of the cylinder A has a flange, G, that bears against the shutter when the cylinder is screwed into position. The cylinder-sections are provided at opposite points with the seats or rests *e e*, that are indented, to form the bearings for the pivots *b b* of the hooks B and C, which serve to fasten the shutter to the staple or button at the window-sills and to the outer hook of the wall. The outer hook C is smaller than the inner hook B, to pass through the hole in the shutter. The inner flange or face part of the cylinder A is recessed or slotted, and is also provided with a projecting guard, F, and rest H, for governing the swinging motion of the hooks B and C.

The rear points *a a' c* of the hooks B and C are curved, so that they admit the passage of the rivet D, the upper rear curved end of the inner hook B fitting and resting in a recess at the rear end of the outer hook C, and the lower curved rear end *c* of the inner hook B bearing on the curved end *a'* of the outer hook C, thus guarding against injury to the fastener by the breaking of any of the ends of the hooks B and C.

It will be seen that in case the lower curved rear end *c* of the inner hook B were to break, the fact that the upper curved rear end *a* of the inner hook B bears on the rear end *a'* of the outer hook C would preserve the working of the hooks B and C, without, however, allowing the raising of the inner hook B from the outside when the shutter is closed.

Each hook is provided with a downward-projecting spur or stop, *d*, which fits and works in a rest, H, and guard F, at each face end of the cylinder A, for the purpose of securing the positive locking of the hooks B and C without slipping over the wall-hook or sill-button,

and also for preventing the rattling or shaking of the shutter. The pivot *b* of each hook is placed near the rear point of the hook to secure the reliable action of the front points of the hooks B and C.

The cylinder A is provided with the guards F F, which inclose the spurs *d d* of the hooks B and C when the sections are riveted, and serve to keep the hooks B and C firm, steady, and in a direct horizontal locking position.

The half-sections of the cylinder A are provided with a rest or seat, *f*, Fig. 4, and recess I, Fig. 4, into which the rests or seats fit, for the purpose of keeping the sections from shifting or sliding about, and thus disarranging the pivots *b b* on which the hooks B and C swing.

The outer hook C is provided with a cap, E, which, fitting closely against the outer face of the cylinder A, prevents the entrance of water when the shutter is closed.

The lower end of the inner flange G of the cylinder A is recessed or provided with an opening, K, through which any water will pass when the shutter is open. By these means, rain, snow, and wet being kept from the inner parts of the fastener, those parts will not become rusty and get out of order.

Having thus described my invention, I claim as new—

1. In a shutter-fastener, the flange or inner face G of the cylinder or case A, having an opening or recess, K, as and for the purpose herein stated.

2. In a shutter-fastener, the fastening-hook C, having the cap E, as and for the purpose herein stated.

3. The nearly circular rear points *a a' c* of the fastening-hooks B and C, substantially as described, for the purpose specified.

4. The fastening-hooks B and C, having downwardly-projecting spurs or stops *d d*, fitting and resting in a recess formed by the guards F F, combined with rests H H, for the purpose herein specified.

In testimony that I claim the foregoing improvement in shutter-fasteners, as above described, I have hereunto set my hand.

JOHN C. KNOEPPEL.

Witnesses:

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