J. W. JOHNSON.
Key Retainers.

2 Sheets—Sheet 1.

No. 199,447. Patented Jan. 22, 1878.

FIG. 1.

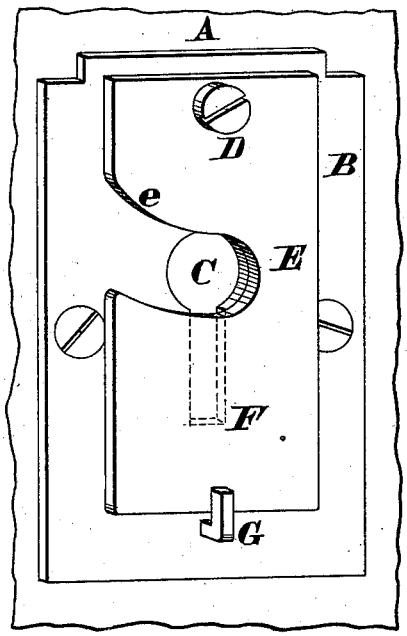


FIG. 2.

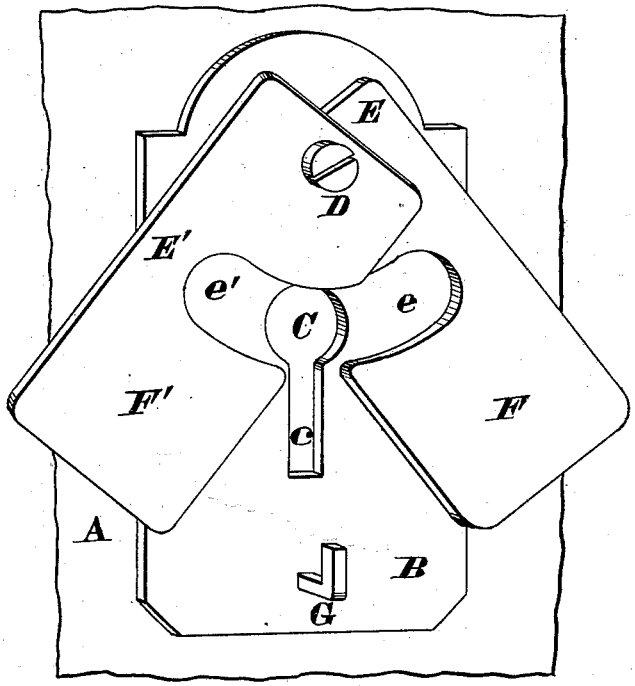


FIG. 3.

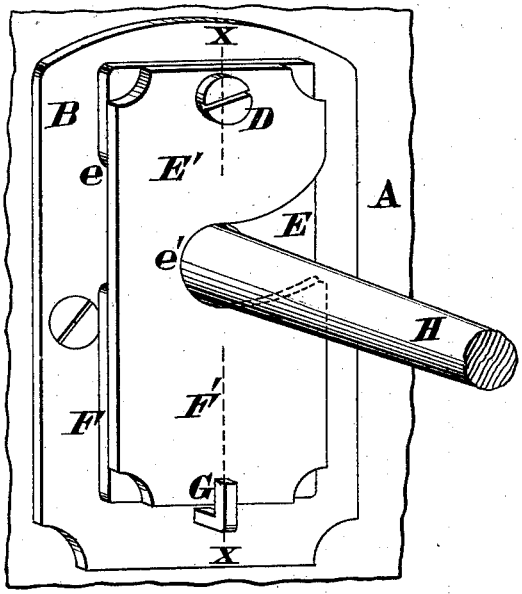
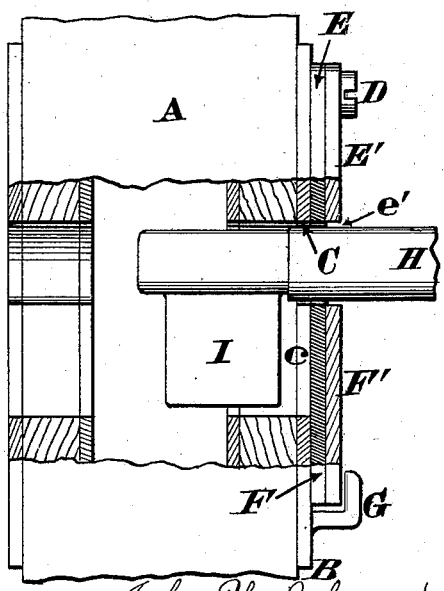


FIG. 4.



Attest.
S. P. Kennedy
Charles Schammel

John Wm. Johnson per
Wm. Hubbell Fisher, Att'y.

2 Sheets—Sheet 2.

J. W. JOHNSON.

Key Retainers.

No. 199,447 Patented Jan. 22, 1878.

FIG. 5.

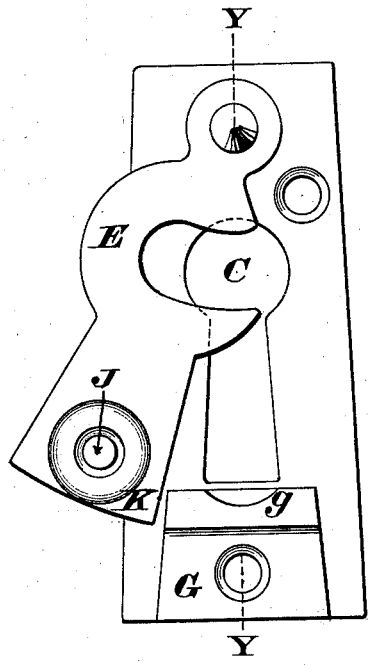


FIG. 6.

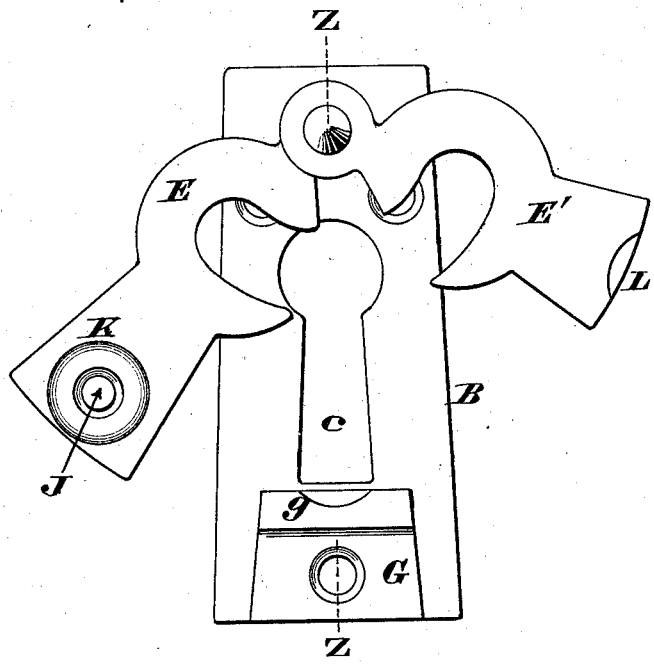


FIG. 7.

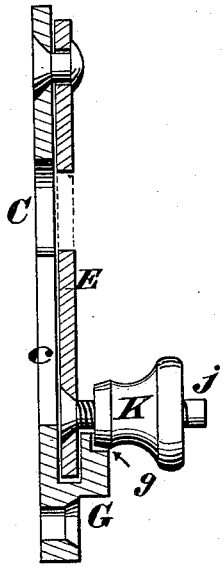


FIG. 8.

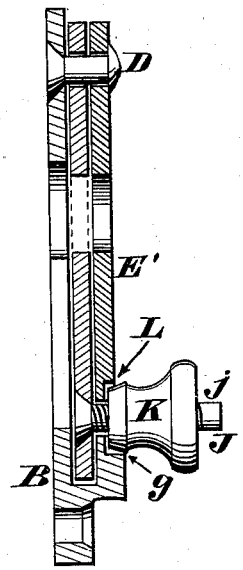
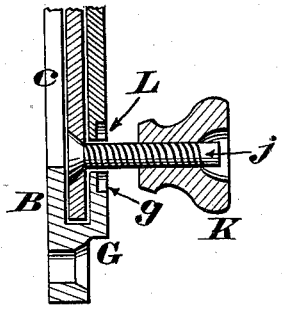


FIG. 9.



John Wm. Johnson,
per Wm. Hubbell Fisher,
Att'y.

Attest.
D. P. Reynolds.
Charles L. Hammel

UNITED STATES PATENT OFFICE.

JOHN WILLIAM JOHNSON, OF CINCINNATI, OHIO.

IMPROVEMENT IN KEY-RETAINERS.

Specification forming part of Letters Patent No. **199,447**, dated January 22, 1878; application filed March 28, 1876.

To all whom it may concern:

Be it known that I, JOHN WM. JOHNSON, a resident of the city of Cincinnati, Hamilton county, and State of Ohio, have invented certain new and useful Improvements in Key-Retainers, of which the following is a specification:

The object of this device is to prevent keys being accidentally detached from the lock, either by a violent slamming of the door or by meddlesome children, or otherwise, while at the same time the key is at perfect liberty to be used for throwing the bolt in either direction.

The retainer is applied to the inner key-hole plate of a door; and consists, first, of a single guard-plate, whose upper end is pivoted to the aforesaid plate at a suitable distance above the key-hole, the guard-plate being provided with a locking device consisting of a recessed guard and a screw-threaded pin and nut, as will be more fully described hereinafter. This guard-plate is long enough to completely close the key-hole, and it is provided with a slot concentric with the suspension-pivot. When the key is placed in the lock, and the pivoted guard-plate allowed to assume its normal position, the lower portion of said guard-plate closes the key-hole so effectually as to prevent the bit of the key passing through the elongated part of the hole.

The device for locking the guard-plate renders it an impossibility for the guard-plate, when locked, to be shifted so as to uncover the key-hole, and consequently the proper key cannot be displaced, and a false one inserted in the lock.

A more complex form of my retainer may be constructed by providing the key-hole plate with two swinging guard-plates slotted from opposite sides, as hereinafter explained. These guard-plates may, when desired, be provided with a locking device, of any suitable kind, the preferred kind being that of my invention, as hereinafter set forth.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the simplest form of retainer, the guard-plate being shown in its normal position and the key not inserted. Fig. 2 is a perspective view of a retainer composed of two guard-plates, which guard-plates are shown swung aside to admit the key. Fig. 3 is a perspective view, showing the key secured by the guard-plates; and Fig. 4 is a vertical section at the line X X, the key being shown as in the act of being withdrawn. Fig. 5 represents the locking device applied to a single guard-plate, the latter being swung aside so as to partially uncover the key-hole proper. Fig. 6 represents the locking device applied to a double guard-plate, said guard-plate being separated far enough to completely uncover the key-hole. Figs. 7 and 8 are vertical sections taken, respectively, at the lines Y Y and Z Z, the guard-plate being shown locked in both of these illustrations. Fig. 9 is a vertical section through the lower portion of the double guard-plate and its accessories, the locking device being shown in its disengaged condition.

A represents a portion of a door, to the inside of which is secured a key-hole plate, B, having the customary eye C and slot *c*. Projecting from this plate, and in line with the slot *c*, is pivot D, from which depends a swinging guard-plate, E, having a notch or slot, *e*, made in it from one side, said slot being, preferably, concentric with the point of suspension. This guard-plate, from its slot *e* to its lower end, is, preferably, a blank or imperforate piece of metal, as shown at F.

G is a hook or guard, which maintains the guard-plate in snug, but not close, contact with the face of the plate B.

Figs. 2, 3, and 4 represent a more complex form of retainer, in which an auxiliary guard-plate, E′ F′, is used in conjunction with the one E. This additional guard-plate is provided with its appropriate slot *e′*, similar to the one *e*, but made from an opposite side of the swinging member E′.

H represents the stem, and I the bit or web, of an ordinary key. Whichever form of retainer is used, the action is essentially the same, as the guard-plate or guard-plates must first be swung aside, so as to allow the key to be inserted in the hole C *c*, after which the pivoted member E or E E′ is allowed to assume its normal position.

The slot *e* allows the guard-plate to swing comparatively free of the stem of the key, and as soon as said guard-plate assumes a verti-

cal position its blank portion F closes the slot *c* of the key-hole.

In this position it is evident that said imperforate part F′ of the guard-plate acts as a guard to prevent the bit I of the key passing through the slot *c*, and consequently the key cannot be accidentally detached by any slamming of the door. (See Fig. 4.) While the key is thus retained in the lock it is free to be turned in either direction, as the slot *e* affords ample clearance to prevent friction. To remove the key it is only necessary to swing the guard-plate E aside far enough to clear the hole C *c*.

It is evident that the guard-plate or guard-plates, together with the key-hole plate, may be made of any ornamental shape, so as to add to the appearance of the door to which they are applied.

The guard-plate may be pivoted to the plate B at a point below instead of above the hole C *c*, in which case said swinging member E *e* F should be made considerably longer, and its lower end loaded, so as to maintain it in an erect position; or the guard-plate may be pivoted either to the right or left of the key-hole C *c*, and caused to cover said hole by a spring or its equivalent device.

In order to lock either or both of the guard-plates securely in their closed position I use the arrangement of devices shown on the second sheet of drawings, and by referring to these illustrations it will be noticed that the single guard-plate E has attached near its free end an outwardly-projecting screw-threaded pin, J, with which is engaged a knob or nut, K, of any appropriate shape. The outer end of this pin is left unthreaded, as at *j*, so as to prevent the nut being disengaged therefrom. The unthreaded portion *j* is the full diameter of pin J.

The hook, guard, or brace G is recessed, as at *g*, to afford a seat for the rear end of knob K when the guard-plate is to be locked, as seen in Fig. 7.

When two guard-plates are to be used with the locking device, the outer guard-plate, E′, must be made somewhat shorter than the inner one, E, so as to clear the pin J. (See Fig. 6.)

The free end of this short guard-plate is provided with a recess, L, similar to the one *g;* and it will be readily understood that when these two guard-plates are brought to a vertical position, and the nut K screwed back, so as to engage with both of said recesses *g* and L, they will then be so securely locked as to prevent them being swung either to the right or left by any person outside of the door. This locked condition of the two guard-plates is shown in Fig. 8. To unlock them, the nut K is screwed outwardly, so as to clear the recesses *g* and L, as seen in Fig. 9. The guard-plates are then free to be swung aside from opposite directions, so as to completely expose the key-hole, as represented in Fig. 6.

Although my invention, in so far as the use of a single guard-plate is concerned, relates more particularly to the means of locking said guard-plate, I wish it to be distinctly understood that when two guard-plates are used in accordance with one feature of my invention I do not limit myself to the employment of any guard or locking devices whatever.

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

1. The combination of plate B C *c*, pivot D, swinging guard-plate E, recessed guard G *g*, screw-threaded pin J, and nut K, for the purpose specified.

2. The combination of plate B C *c*, pivot D, swinging guard-plates E E′ L, screw-threaded pin J, and nut K, as and for the purpose described.

3. The combination of key-hole plate B C *c* and swinging slotted guard-plates E E′, substantially as and for the purposes specified.

JOHN WILLIAM JOHNSON.

Attest:

WM. R. FEE,

W. S. JOHNS.