J. HAPTONSTALL.
LOCKING-LATCH.

No. 192,988. Patented July 10, 1877.

Fig. 1.

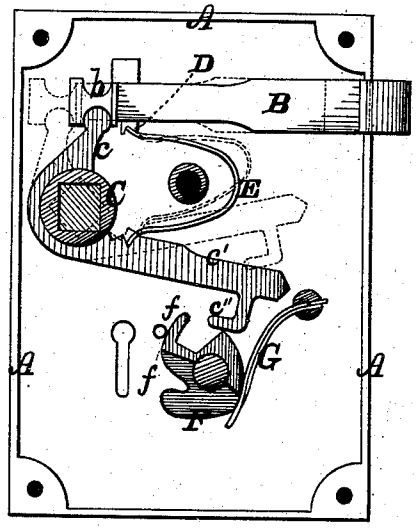
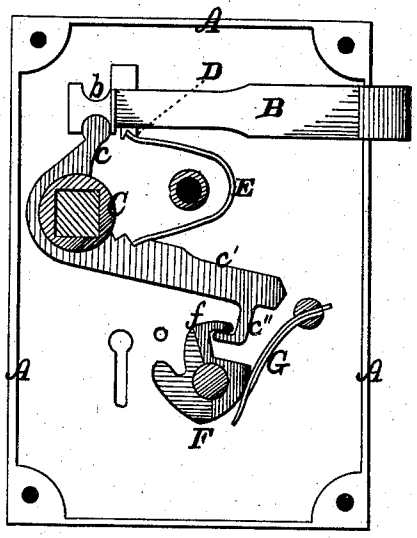


Fig. 2.



WITNESSES.
Jas. C. Hutchinson.
Henry C. Hazard.

INVENTOR.
John Haptonstall, by
Prindle & Co, his Attys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN HAPTONSTALL, OF PERRY, IOWA, ASSIGNOR TO HIMSELF, GEORGE HARLAN, AND P. C. RUDE, OF SAME PLACE.

IMPROVEMENT IN LOCKING-LATCHES.

Specification forming part of Letters Patent No. **192,988**, dated July 10, 1877; application filed April 18, 1877.

To all whom it may concern:

Be it known that I, JNO. HAPTONSTALL, of Perry, in the county of Dallas and in the State of Iowa, have invented certain new and useful Improvements in Locks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a side elevation of my improved lock, with the covering-plate removed and the latch unfastened and free to move longitudinally; and Fig. 2 is a like view of the same, with the stop-dog thrown into engagement with the armed hub, so as to lock said latch at the outer limit of its motion.

Letters of like name and kind refer to like parts in each of the figures.

The design of my improvement is to enable a spring-latch fastening for a door to be locked at will; to which end it consists, principally, in the novel means employed for locking the latch in position, substantially as and for the purpose hereinafter shown.

It consists, further, in the spring-latch, in which the latch, the armed hub provided with a hooked lug, the spring for operating said latch, the dog having the hooked arm, and the spring for retaining said dog in position, are combined to operate in the manner and for the purpose substantially as set forth.

In the annexed drawing, A represents a rectangular casing of usual form, within which, near its upper end, is placed a latch, B, that is capable of longitudinal motion, so as to enable its outer end to project from or be withdrawn within the edge of said casing, in the usual manner.

Pivoted within the side plates of the casing A, below the rear end of the latch B, is a hub, C, which has the usual square axial hole for the reception of the shaft of a knob, and is provided with a radial arm, *c*, that extends upward into a notch, *b*, which is formed within the lower side, near the rear end of said latch. Said notch *b* is made semicircular, and the end of said arm *c* is correspondingly formed, so as to insure contact between their bearing-surfaces during the changes in position of said arm.

A second arm, *c'*, extends forward and slightly downward from the lower side of the hub C at about a right angle to the arm *c;* and between the upper side of the same, near its inner end, and a lug, D, that is placed above, near the latch B, is placed a flat U-shaped spring, E, which operates to hold said arm *c'* with a yielding pressure at the lower limit of its motion.

If, now, the hub C is turned upward and rearward the latch B will be retracted within its casing, and the parts assume the positions shown by dotted lines in Fig. 1, while upon releasing said hub the spring E will return said parts to the positions shown by the full lines of said figure. The same result is produced by closing the door to which the lock is attached, the beveled end of said latch being forced into said casing by contact with its keeper.

In order that the latch B may be locked in position, so as to prevent its retraction, the following-described means are employed:

Below the forward end of the arm *c'* is pivoted a dog, F, which, upon its rear side, has any desired configuration to enable it to be partially rotated by means of a key, and at its front side is provided with an angular face, against which bears a flat spring, G, said spring operating in the usual manner to hold said dog in either of the positions shown, to which the latter may be turned by said key.

Upon the upper side of the dog F is provided an arm, *f*, which projects upward, and then forward, and, when said dog is turned to the position shown in Fig. 2, engages with a hooked lug, *c''*, which extends downward and then rearward from the lower side, near the outer end of the arm *c'*.

It will be seen that when the dog F is in engagement with the arm *c'*, as shown in Fig. 2, the latter is prevented from moving upward and, through the hub C and arm *c*, the latch B is locked in position, while by reversing the position of said dog, as seen in Fig. 1, said latch is free to move once more.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In combination with the arm *c'* of the hub

C, having the hooked lug *c''* near its outer end, the dog F, pivoted within the casing A, and provided with a hooked arm, *f*, which may be caused to engage with or be released from said lug *c''*, and the spring G, arranged to bear against and hold in position said dog, substantially as and for the purpose shown.

2. The spring-latch described, in which the latch B *b*, hub C, having the arms *c c'* and hooked lug *c''*, the spring E, the dog F, provided with the hooked arm *f*, and the spring G, are constructed and combined to operate in the manner and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of March, 1877.

JOHN HAPTONSTALL.

Witnesses:

QUINCY A. WILLIS,

W. H. ADKINS.