

United States Patent Office.

NICHOLAS PETRÉ, OF NEW YORK, N. Y.

Letters Patent No. 111,567, dated February 7, 1871.

IMPROVEMENT IN LATCH-LOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, NICHOLAS PETRÉ, of the city county, and State of New York, have invented certain new and useful Improvements in Latch-Locks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents a view of the interior of the lock, the back-plate being removed to show the interior.

Figure 2 represents a longitudinal transverse section through the lock and plate.

Figure 3 represents the position of the several parts of the lock when the bolt is thrown out of action, with the knob-shaft or its levers, so as not to be moved by them.

Figure 4 represents, in perspective, the interior side of the back-plate, to show the studs or pivots thereon for guiding and directing some of the moving parts of the lock, said studs, for cheapness, being cast on and with said plate.

Similar letters of reference, where they occur in the several drawings, represent like parts of the lock in all of them.

This invention consists in the manner in which the bolt, its hinged limb or member, spring, stops, and guides are connected, arranged, and operated by a pivoted lever from the exterior of the lock, to throw out or let in the knob attachments, as may be required.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The lock-case A is cast with its flanges, studs, and openings on and in it, as is also the back-plate B, so that they will not only drop together without fittings, but also furnish guides, supports, and stops for the several interior moving or operative parts, of which there are but five, as follows:

The bolt C; its hinged limb or member, D; the lever E; the hub and its arms F, that are operated by the knob-shank or shaft; and the spring G.

The bolt is cast with an opening, *a*, in it, so that it may move past and be guided by a projecting piece, *b*, that is cast on and with the lock-case A.

From the upper rear end of the opening *a* a recess, *c*, is made, that will, when the bolt is thrown out of action with the arms F, take in the permanent projecting piece *b*, and prevent the bolt from being moved in or out of the lock, or in other words, lock it.

There is also cast upon the bolt a recessed lug, *e*, in a hole, in which the pivot or stud *d* of the hinged limb D drops, and whereon it works.

The spring G bears against this lug *e*, and the tendency of the spring is constantly to force the bolt out of the lock-case and upward, to keep it in a position to be caught and drawn in by the arm F, operated from without by the knob.

The lever E is pivoted by the stud *f*, cast on the inside of the plate B, which stud passes through the hole *g* cast in the lever.

This lever E is designed for moving the bolt C out of action with the turning arms F, as shown in fig. 3, and when so thrown out it is done against the resistance of the spring G, the reactionary power of which is constantly exerted to force it (the bolt) back into its working position and connection, as seen at fig. 1.

The limb or member D is pivoted, as heretofore mentioned, to the bolt C at *d*, and this limb has cast in and with it a slot, *j*, into which a stud, *i*, cast on the plate B, enters, and by which stud said limb D is controlled when the bolt proper, of which it is really a part, is thrown out of or allowed to come into action, as explained.

The moving of the bolt C out of action causes the limb D to also move out of action, its stud *i* serving as a stationary fulcrum, upon which it swings.

When the lever E is moved so as to allow the bolt to be returned into action by the recoil of the spring G, the limb D is also swung upon its hinge at *d*, caused by the stationary stud *i*, to also swing into action with the arms F.

h h are stops against which the rear end of the bolt as well as of its hinged limb D take to prevent the bolt from coming too far within the lock-case.

While I prefer the single spring G for accomplishing the two movements of the bolt, viz., upward and outward, yet for the purpose of evading my invention two springs may be used, one to force the bolt in one direction and the other in the other direction.

This I should regard as an obvious change, but still a part of my invention.

Having thus fully described my invention,

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

In combination with the bolt C and tripping-lever E, the hinged piece or limb D and its slot *j* and pin *i*, and the spring G, moving on the incline *e*, for the double purpose of allowing the bolt to be thrown and held out of and to be returned into action with the arms F, the parts being arranged to operate substantially as described.

N. PETRÉ.

Witnesses:

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