(Model.)

J. GÉRARD.

LATCH.

No. 262,219. Patented Aug. 8, 1882.

Fig. 1.

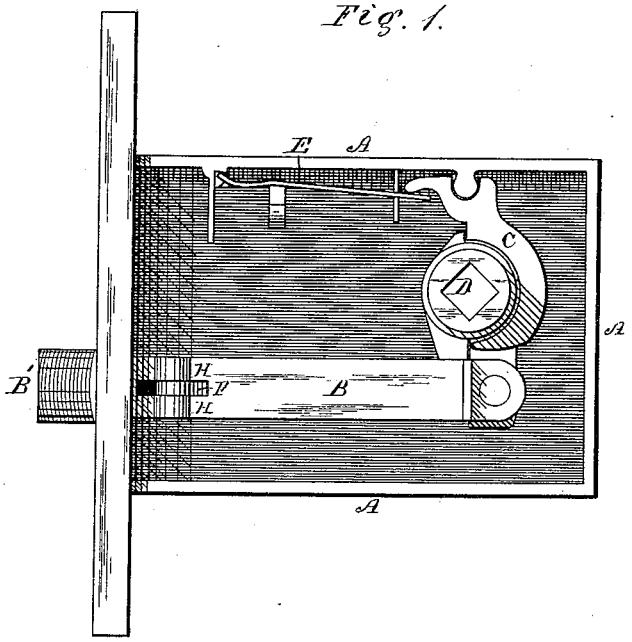
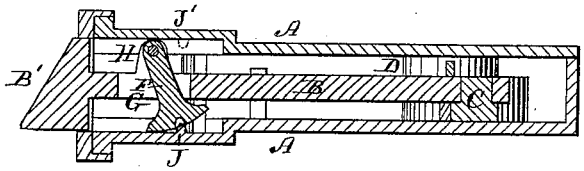


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN GÉRARD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE NASHUA LOCK COMPANY, OF NASHUA, NEW HAMPSHIRE.

LATCH.

SPECIFICATION forming part of Letters Patent No. 262,219, dated August 8, 1882.

Application filed April 18, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN GÉRARD, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Anti-Friction Latches; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My improvement relates to latches, such as are commonly placed in door-locks and operated by a spring which yields as the door is closed by the action of an incline upon the end of the latch, and then presses the latch out to hold the door.

The object of my invention is to provide a means of diminishing the friction caused upon the bearings of the latch by the cross-pressure against the latch-bolt by the action of the inclined end when it is pressed in.

In the accompanying drawings illustrating my invention, Figure 1 is an interior view of my improved latch with the side of the case removed to show the construction. Fig. 2 is a horizontal section through the latch and case.

A is the case.

B is the latch-bolt, provided with a projecting inclined part, B′, in the usual manner. The latch-bolt B is pivoted to a lever, C, which is operated by the knob-tumbler D and a spring, E, in the customary manner. These parts may be of any ordinary construction.

F is a rocking sector which rolls against the side of the case. It passes through a slot in the latch-bolt B, and is pivoted to the projections H on the bolt. It is held in place laterally by the sides of the slot, and on its curved edge it is provided with a notch, into which a tooth or bar upon the side of the case fits, so that the sector F is held by this tooth and its pivot from being displaced in the direction of the length of the latch-bolt. In order to make the latch reversible, there is another tooth, J′, upon the opposite side of the case, which is used when the latch is turned half-way round, so that the sector F rolls against the side opposite to that shown in the drawings.

Instead of having a tooth upon the side of the case and a notch in the part F, it is obvious that a tooth might be made upon the sector and a notch in the case. The arrangement shown is, however, the best.

The operation of my improved latch will be readily understood. When the incline B′ strikes against the jamb of the door the bolt will be forced downward, as shown in Fig. 2, and without the sector F it would be pressed against the bearing in the front plate of the case. With my improvement, however, the part F receives the pressure, and the bolt is easily moved back, while the sector rolls against the side of the case. The sliding friction is thus converted into a rolling friction, and very little force is required to press the bolt in.

What I claim as my invention is—

1. In combination with the latch-bolt B and the case A, the rocking sector F, pivoted to said bolt and held to a rolling motion on said case by a tooth, J, substantially as described.

2. The combination of the latch-bolt B, provided with a slot, G, the sector F, pivoted to said bolt and fitted to rock within said slot, and the case A, said case and sector being provided with a tooth and notch, whereby said sector is confined to a rolling motion on said case, substantially as described.

JOHN GÉRARD.

Witnesses:

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