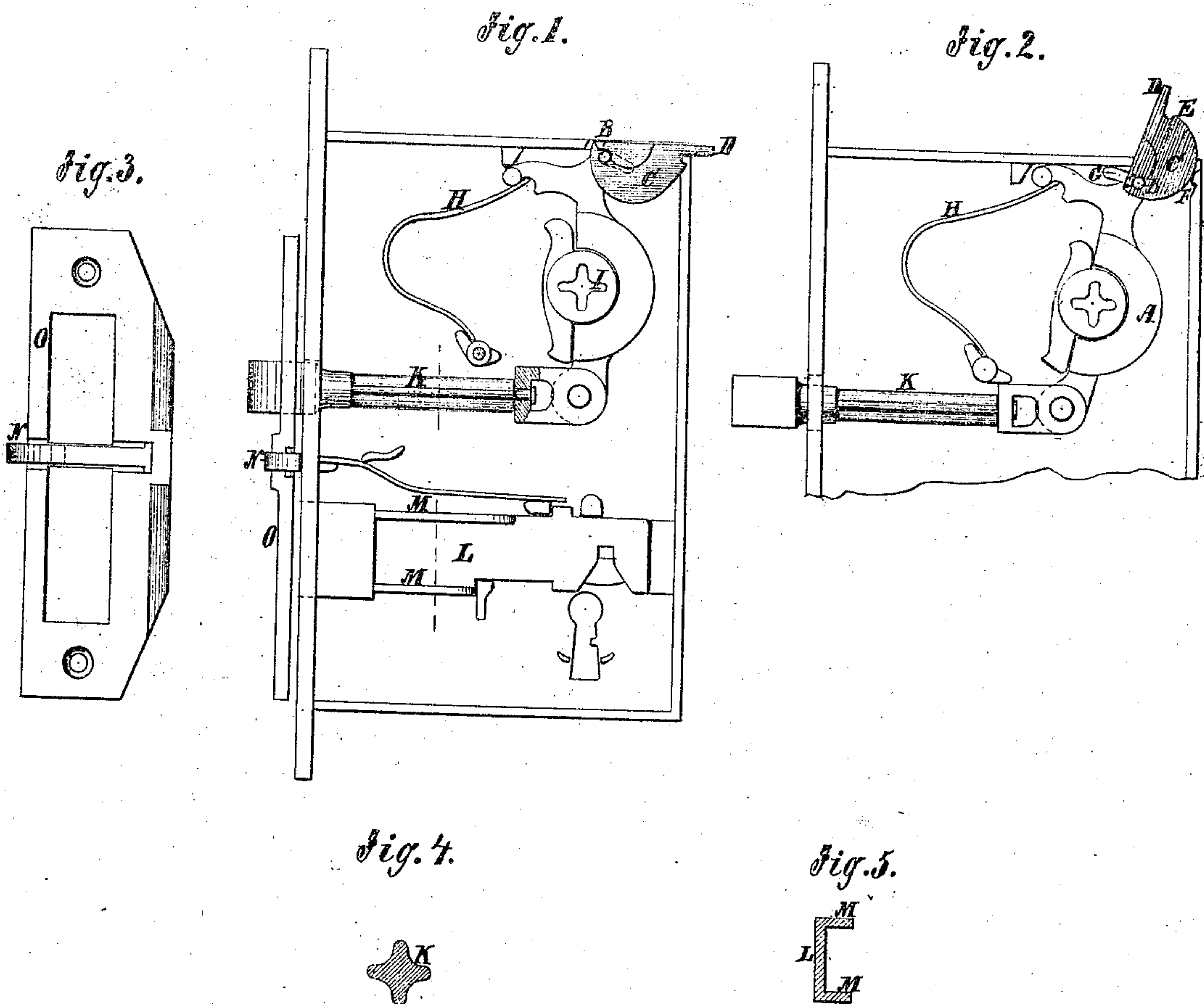


J. Gérard. Lock.

103868

PATENTED JUN 7 1870



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JOHN GERARD, OF TRENTON, NEW JERSEY.

Letters Patent No. 103,868, dated June 7, 1870.

IMPROVEMENT IN 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, JOHN GERARD, of Trenton, in the county of Mercer and State of New Jersey, have invented a new and useful Improvement in Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The invention relates to mortise-locks, and consists—

First, in combining the latch-bolt lever with the cam, as hereinafter specified, and dispensing altogether with a slide, as used under the patent to B. Erbe, Nov. 6, 1866.

Second, in combining a friction-spring with the striking-plate.

Figure 1 is an elevation of my improved lock, with one plate removed, showing the position of the parts when the lever is in working position, and the latch-bolt is shot;

Figure 2 is a partial section in the same view, showing the lever thrown back, and the latch-bolt drawn out for turning;

Figure 3 is an elevation of the striking-plate and spring attached;

Figure 4 is a cross-section of the tail of the latch-bolt; and

Figure 5 is a cross-section of the locking-bolt.

The latch-bolt lever A is pivoted, at the top, by a small steel pin, B, in the point of a cam-plate, C, let into a slot in the top plate of the case, and provided with a small handle, D.

At the junction of this handle is a small notch, forming a projection, E, which engages with a notch, F, in the back plate of the lock, when the cam is forced down, as shown in fig. 2, and holds it from being forced up again.

The pin B projects at one side, and works in an inclined groove or slot, G, in one of the side plates, by which the point of the cam is controlled, and the cam and lever A are held up.

The spring H, which keeps the lever A up against the tumbler I, also has a tendency to keep the point E of the cam engaged with the notch F.

To raise the cam up for letting the upper end of the lever A back, as shown in fig. 2, the cam is first pushed forward a short distance to disengage the point E.

When the lock is placed in the mortise in the door, the wall of the mortise prevents the cam from raising it, and confines the lever in the required position.

In order to be able to provide the smallest latch-bolt tails or shanks K, that may be consistent with the strength required, and also to cause the least "blowing" of the composition to make the head, I propose to use wrought or rolled-metal tails, made in the form shown in cross-section at fig. 4, which possesses great strength, and is favorable to the adhesion of the metal cast around it.

I propose, also, to employ knob-spindles, of the same form, which are preferable on account of the strength, and they require less drilling in attaching the knobs.

I also propose to employ flat, wrought, or rolled-metal locking-bolt shanks, L, with strengthening-flanges, M, at the edges; also, for the purpose of reducing the quantity of metal used, as much as possible, both for economy and for insuring more homogeneous castings for the heads.

N is the friction-spring, attached to the striking-plate O, and arranged to bear against the front plate of the lock, when the door is shut, to prevent it from rattling when the wind blows, or when other doors are opened or closed suddenly.

Having thus described my invention,

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

1. The latch-bolt lever A, pivoted to the cam C by the steel pin B, working in the inclined slot G, the said cam being arranged in a slot in the top of the lock, and arranged to catch in a notch, F, to hold the lever in the working position, all substantially as specified.

2. The combination, with the striking-plate, of the friction-spring N, substantially as specified.

JOHN GERARD.

Witnesses:

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