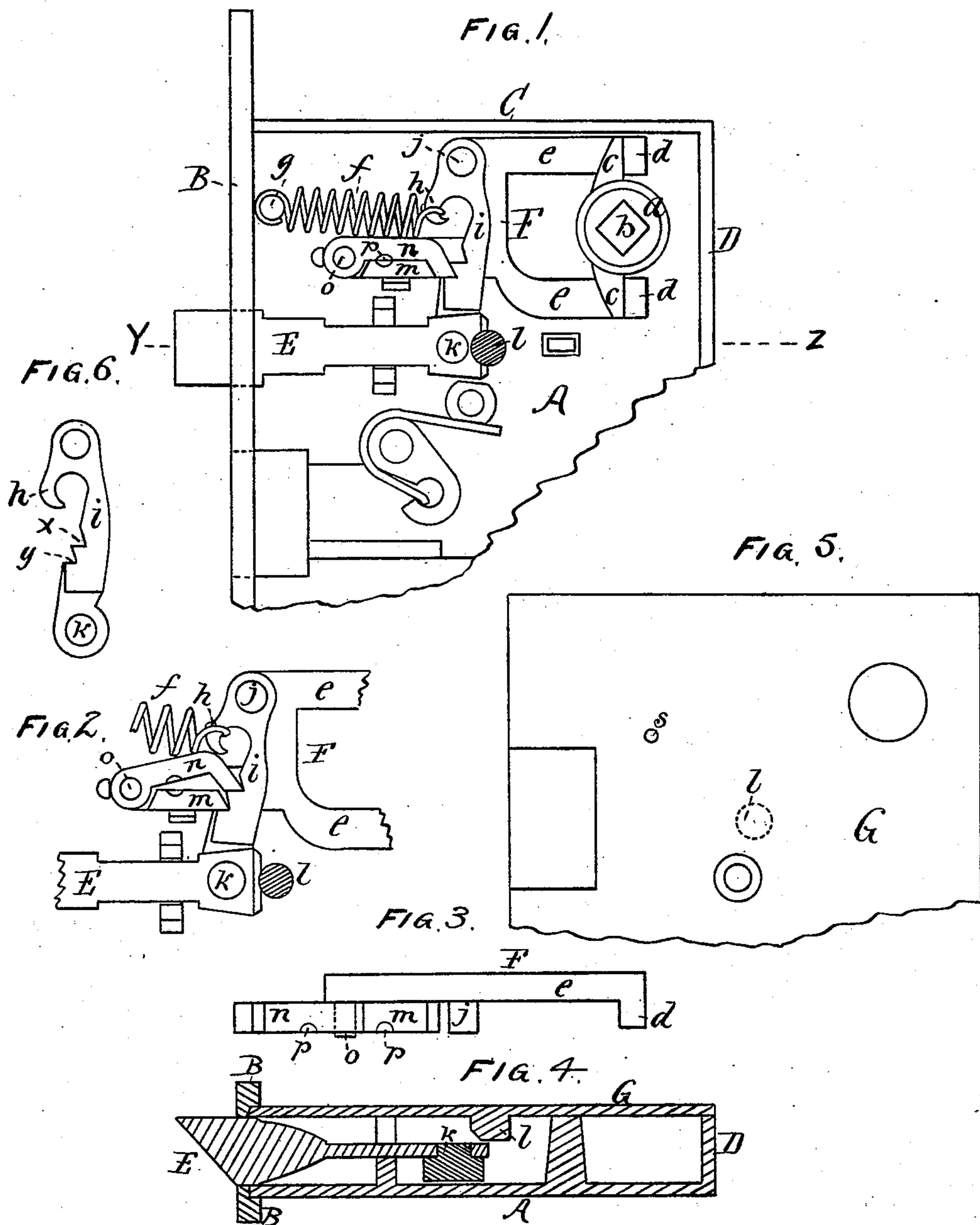


(Model.)

H. PICKFORD.
Reversible Latch.

No. 243,397.

Patented June 28, 1881.



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HENRY PICKFORD, OF CHELSEA, MASSACHUSETTS.

REVERSIBLE LATCH.

SPECIFICATION forming part of Letters Patent No. 243,397, dated June 28, 1881.

Application filed February 15, 1881. (Model.)

To all whom it may concern:

Be it known that I, HENRY PICKFORD, of the city of Chelsea, State of Massachusetts, have invented an Improvement in Locks, of which the following is a specification.

This invention relates to an improvement in those locks which are inserted in a mortise cut in the edge of the door-stile, or which are secured upon the outside thereof, and which are known and designated as "mortise" or "rim" locks; and the invention consists in an improved means of liberating the bolt (without opening the lock) that it may be so adjusted as to render the lock either a right or left lock, as may be desired, which invention will, in connection with the annexed drawings, be hereinafter fully described, and specifically defined in the appended claims.

Such locks have been long constructed so as to be susceptible of reversal, as either right or left, without removing the side plate or cheek of the lock, a binding-bar being so arranged as to hold the bolt in contact with the lever or other device by or through which it was actuated, such binding-bar being accessible from the edge of the body of the lock, and when drawn outward so as to be disengaged from the bolt the same could be readily released from its connections, removed from the lock, and reversed as desired, and when replaced and such bar was returned in position the bolt was thereby held in proper contact with the other coacting parts; but a serious objection to such device has always existed in the fact that when the accessible end of said binding-bar was placed downward in the door the jars and concussions thereof in opening and closing the same tended to and often did cause said bar to move downward into contact with the lower face of the mortise, where it would catch in the grain of the wood, and by the force exerted upon the lock in attempting to remove it said bar would be forced still farther outward and into the wood, rendering it impossible to remove the lock from the mortise except by cutting away the door-stile to the necessary extent.

To remedy this objection and difficulty I so construct my lock that no part of the internal mechanism extends through the inclosing-case except the securing-bolts and the tumbler which

receives the knob-spindle, and so that by inserting the end of a small pointed instrument through a hole formed for the purpose in the cheek or cover of the lock the device will be so actuated that the bolt may be readily removed and reversed, and as easily replaced in position.

Figure 1 is a side or plan view of a lock embodying my improvement, said view showing the interior mechanism and with the removable cover separated from the lock. Fig. 2 is a detached plan view of certain of the parts which are shown in Fig. 1. Fig. 3 is an edge view of the stirrup and dog as viewed from the right in Figs. 1 and 2. Fig. 4 is a longitudinal section taken through the lock complete, as on line Y Z, Fig. 1. Fig. 5 is a plan view of the removable cover of the lock-case. Fig. 6 is a plan view of the lever by or through which the bolt is actuated.

In these views A represents the back of the lock-case, to which the face-plate B is permanently secured or with which it is formed as an entire casting.

C C are the edge walls, and D the rear end wall of the case, which are formed on back A. The usual hub is shown at *a*, having the square hole *b* for the knob-spindle, and with the spurs *c c*, which engage the studs *d d* on the arms *e e* of the sliding stirrup F in the usual manner.

The bolt-lever *i*, pivoted on stud *j* of the stirrup and connected by its pivot *k* with bolt E, is arranged to operate in the well-known manner, while the returning-spring *f*, secured at one extremity to stud *g* formed on back A, and at the other end secured to bar *h* of lever *i*, performs the usual and well-known office of projecting bolt E beyond the face-plate B after it has been retracted by the action of hub *a* and the intermediate devices.

Upon the front end of stirrup F is a stud, *o*, upon which is pivoted the dog *n*, which is arranged to engage in either of the seats *x y* formed in lever *i*. Said dog is habitually held by the lateral pressure of spring *f* against the projection *m* formed upon stirrup F, in which case the dog engages seat *y*; but when a small pointed and suitable instrument is introduced through passage *s* in the removable cover and is forced into the slight indentations *p* formed in dog *n* and projection *m*, such dog will be

thereby forced laterally away from *m* until disengaged from seat *y* in lever *i*, which latter will be thereupon moved forward by spring *f* until arrested by the engaging of said dog in seat *x* or by contact with projection *m*, according as constructed.

To retain bolt *E* on pivot *k* of lever *i* a stud, *l*, (shown in section in Figs. 2 and 4, by dotted lines in Fig. 5, and in plan in Fig. 3,) is so placed on plate *G* that when dog *n* is in seat *y* of lever *i* said stud is over the inner end of bolt *E* sufficiently to retain it on stud *k*; but when the dog is released from seat *y* the lever *i* moves bolt *E* forward from beneath stud *l*, when the bolt may be raised and released from stud *k*, for the purpose of withdrawing it from the case, as before specified. When the bolt has been replaced on stud *k* and is forced inward, spring *f* will press dog *n* against projec-

tion *m*, so that it will by its contact with seat *y* arrest the outward movement of the bolt before it is disengaged from said stud *l*.

I claim as my invention—

1. In a reversible latch, the combination of stirrup *F*, lever *i*, spring *f*, dog *n*, stud *l*, and bolt *E*, substantially as specified.

2. In a reversible latch, the described combination of lever *i*, coiled spring *f*, and dog *n*, whereby said lever is engaged with the dog by the contractile force of the spring, and the dog is vibrated and held in position by the lateral force of the spring, substantially as specified.

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Witnesses:

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