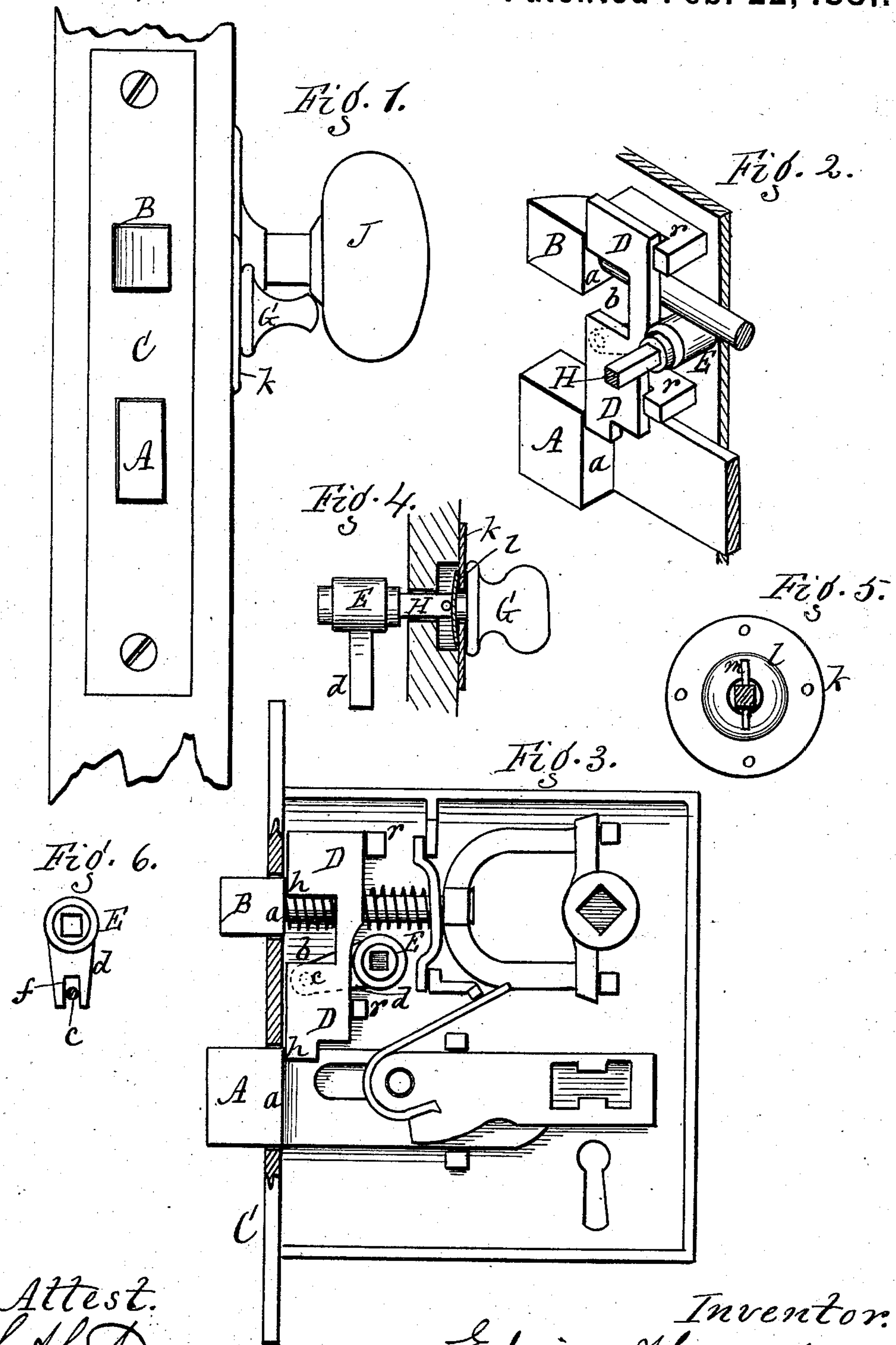


(Model.)

E. HAND.
Lock.

No. 238,113.

Patented Feb. 22, 1881.



Attest.
Chas. J. Jansen
Notary Public

Inventor:
Elias Hand,
per R. E. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

EKINS HAND, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF TO
GEORGE PARK, OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 238,113, dated February 22, 1881.

Application filed December 20, 1880. (Model.)

To all whom it may concern:

Be it known that I, EKINS HAND, of Rochester, Monroe county, New York, have invented a certain new and useful Improvement in Locks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of the edge of a door, showing a mortise-lock attached thereto. Fig. 2 is a perspective view of a portion of the interior of the lock, showing my improvement. Fig. 3 is a plan view of the interior of the lock, the cover of the lock being removed. Figs. 4, 5, and 6 are detail views.

My improvement relates to door-locks in which both a lock-bolt and a latch are employed.

It also relates to what are known as "mortise-locks."

The invention consists in the combination, with the lock-bolt and the latch, of a cross-slide which locks both of said parts out, a separate socket-piece and crank connected with the slide, and a separate knob, which rests on the inner side of the door, provided with a spindle, which rests within the socket-piece, whereby the cross-slide is operated in a mortise-lock, as hereinafter more fully described.

The ordinary works of the lock are the same as in other locks well known in the market; hence I will not give a minute description of the same here.

A represents the lock-bolt, and B the latch. These are thrown forward and backward through the face-plate C in the ordinary manner. Each of these parts has a square shoulder, *a*, which, when the ends of said parts are thrust out, comes in line with the inner side of the face-plate.

D is the cross-slide. It consists of a plate of iron, which rests in guides or ways *r r*, cast on the inner face of the lock-case. It lies close to the inner face of the face-plate, and is movable up and down. On its edge next to the face-plate it has a square notch, *b*, of sufficient size to allow the latch to be thrown back into it when in coincidence. On its under side it has a projecting pin, *c*, which engages with the crank of the socket-piece.

E is the socket-piece, the same consisting of

a hollow hub, which is set into bearings or holes in the lock-case so as to turn freely. On one side it has a projecting crank-arm, *d*, which extends under the cross-slide D, and has a slot, *f*, in its end, which receives the pin *c* of the slide. It will be seen that as the socket-piece is turned the cross-slide will be correspondingly thrown up or down.

G is a small knob or finger-piece, which rests on the inner side of the door, and has a square spindle, H, which passes into the socket-piece E. By turning the knob the socket-piece will be correspondingly turned. In addition to this small knob, the ordinary larger knob J is employed for operating the latch in the ordinary way.

When the lock-bolt and latch are both protruded, as shown, and the cross-slide D is thrown down to its lowest position, the corners *h h* of the slide move behind the shoulders *a a* of the bolt and latch and hold them out, so that neither can be retracted till the cross-slide is thrown up again. The whole is under control of a knob on the inside of the door. By the means above described a mortise-lock can be used.

I am aware that in exterior locks, or those used upon the surface of the door, a slide has been used locking the lock-bolt and latch; but such a device is inoperative in mortise-locks without the use of the socket-piece, crank, and the connecting-spindle and knob above described, and which constitute the essential features of my invention.

This improvement is applicable to a great variety of mortise-locks, and which have the lock-works of different constructions.

Between the knob G and the wood-work of the door is an escutcheon, *k*, and inside of this is a spring-washer, *l*, held by a pin, *m*, passing through the spindle on the opposite side of the washer. The escutcheon is fastened to the wood, and the spring-washer pressing against the pin forces the knob inward against the escutcheon with such force as to produce the necessary friction to hold the knob in a fixed position at whatever point it is turned to. This is essential to hold the cross-slide in position when raised and prevent its falling by jarring of the door or other strain.

Having thus described my invention, what

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

1. In a mortise-lock, the combination, with the lock-bolt A and latch B, of the cross-slide 5 D, resting against the shoulders *a a* of said parts, and provided with the notch *b*, the socket-piece E, provided with a crank-arm, *d*, connecting with said slide, a spindle, H, resting in the socket-piece, and a knob or finger-piece, G, attached to the spindle and resting 10 inside the door, the whole arranged to operate in the manner and for the purpose specified.
2. In a mortise-lock, the combination, with

the cross-slide D, socket-piece E, spindle H, and knob G, of the spring-washer *l*, held by a 15 pin, *m*, inside of the fixed escutcheon *k*, and serving to produce friction sufficient to hold the cross-slide from slipping when in the elevated position, as herein shown and described.

In witness whereof I have hereunto signed 20 my name in the presence of two subscribing witnesses.

EKINS HAND.

Witnesses:

R. F. OSGOOD,
GEORGE PARK.