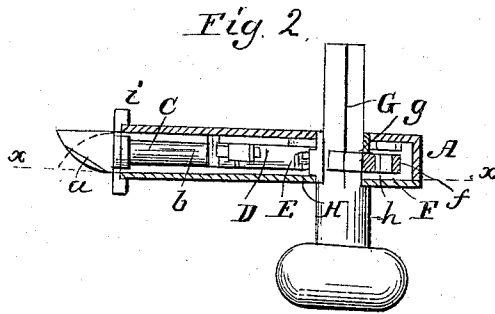
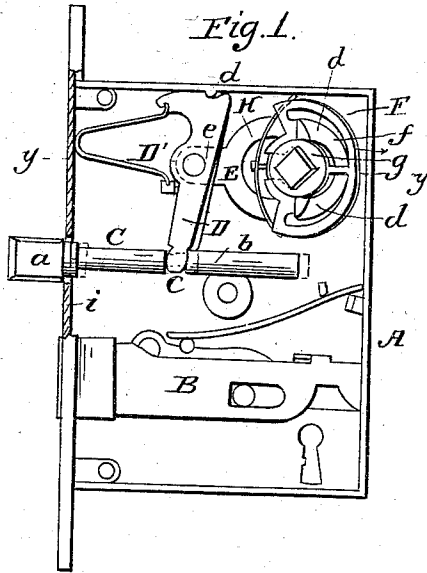
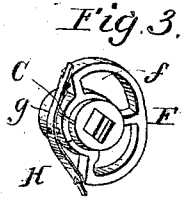


W. S. KIRKHAM.

Lock.

No. 32,521.

Patented June 11, 1861.



Inventor
W. S. Kirkham.

UNITED STATES PATENT OFFICE.

W. S. KIRKHAM, OF BRANFORD, CONNECTICUT.

LOCK AND KNOB-LATCH.

Specification forming part of Letters Patent No. 32,521, dated June 11, 1861; Reissued January 27, 1863, No. 1,390.

To all whom it may concern:

Be it known that I, W. S. KIRKHAM, of Branford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Locks and Knob-Latches; 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, making a part of this specification, in which—

Figure 1 is an interior view of a lock with my improvement applied to it, the front plate of the case being removed as indicated by the line *x, x*, Fig. 2. Fig. 2 is a section of the same, taken in the line *y, y*, Fig. 1. Fig. 3 is a detached perspective view of the hub of the knob-arbor.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in locks or knob latches, whereby the latches may be turned so as to suit either right or left-hand doors, and properly secured in position so that they cannot be casually turned. By this turning of the latch its bevel is brought in proper relation with the "nosing" on the casing in whichever position the door may be hung, and the inverting of the latch case to effect such result (which is frequently done) is rendered unnecessary.

Various plans have been devised for turning or adjusting the latches, some of which are complicated and others are liable to turn or move casually, difficulties which are, it is believed, fully obviated by this invention.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents the case of a lock; B is the bolt; and C, the latch. The latch C, is beveled as usual at one side at its outer end as shown at *a*. The inner part of the latch C, is of cylindrical form as shown at *b*; and at about the center of said part *b*, there is made a recess *c*, in which the lower end of a lever D, fits, said lever having its fulcrum at *d*, and being connected at *e*, to a slide E, in which the hub F, of the knob-arbor G, is fitted, and works against projections *d, d*, on the slide E, as shown in Fig. 1.

The hub F, is turned by the knob arbor, shown in red outline, and throws back the slide E, so as to actuate the latch C, through the medium of the lever D, and throw said

latch back by turning the knob-arbor in either direction. This operation of the latch however is well known and therefore does not require a minute or particular description. The lever D, has a spring D', acting upon it, said spring having a tendency to keep the latch thrown out from the case. The hub F, however is constructed entirely on a different principle from those hitherto used. It is formed of two parts *f, g*, as shown clearly in Fig. 3. The part *f*, is the portion that acts against the projections *d, d*, of the slide E, and the part *g*, has a recess *h*, to receive the central part of part *f*. Each part however has a square opening through it to allow the knob arbor G, to pass through.

The part *g*, of the hub is retained in proper position in the case A, in consequence of its ends fitting in bearings in the front and back plates of the case A, and the part *f*, is retained in proper position by the knob arbor G. When the knob-arbor G, is fitted in the two parts *f, g*, of the hub, therefore the latch C, is in proper position and all the parts in proper working order.

The part *g*, of the hub F, has a spring H, attached to it. This spring H, bears against the part *f*, at its top and bottom as shown clearly in Fig. 1, and would throw the part *f*, of the hub F, backward as indicated by the arrow, were part *f*, not retained in position by the knob arbor G. This throwing back of the part *f*, of the hub F, would of course move the slide E, in a corresponding direction and also the latch C, and the outer part of the latch C, which has the bevel *a*, on it, would be at the outer side of the face-plate *i*, of the lock case, and consequently the latch may be turned so as to suit either a right or left-hand door. When however the knob-arbor G, is passed through the two parts *f, g*, of the hub, the arbor keeps the part *f*, in proper position, and the inner end of the outer part of the latch just within the face plate *i*, and consequently the latch C, cannot be casually turned. In applying the lock to a door, therefore, if the latch C, is not in the proper position to suit the door, or rather the way in which the door is hung, the knob-arbor is withdrawn and the spring H, allowed to throw back the part *f*, of the hub F, and consequently throw out the front part of the latch free from the face plate *i*, so that the latter may be turned.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

Constructing the hub F, of two parts *f, g*,
5 fitted together as shown and both parts placed on the knob-arbor G, and used in connection with the spring H; the above

parts being arranged with the slide E, lever D, and latch C, to operate as and for the purpose set forth.

WILLIAM S. KIRKHAM.

Witnesses:

H. V. C. HOLCOMB,
N. B. HALL.