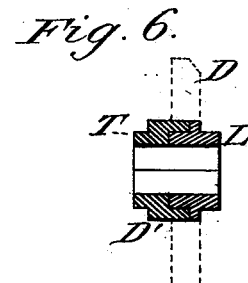
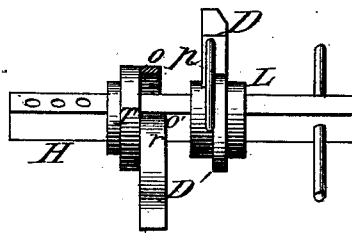
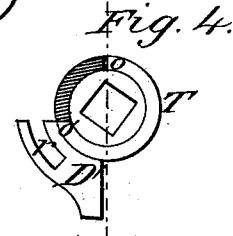
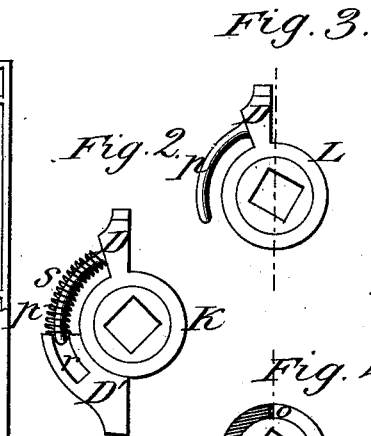
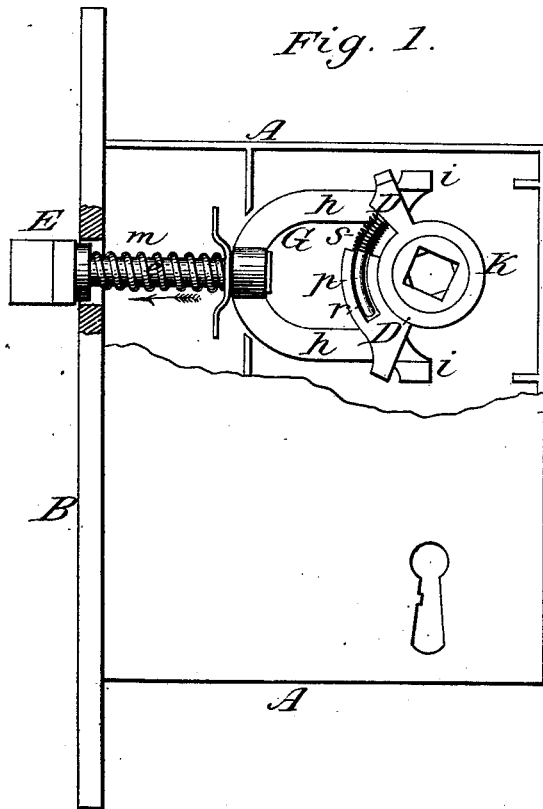


J. J. DINNAN.  
Reversible Latch.

No. 215,215.

Patented May 13, 1879.



Attest:

Inventor.

Charles K. Bush  
Henry & Newton

John J. Dinnan.

# UNITED STATES PATENT OFFICE

JOHN J. DINNAN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HENRY ROGERS, OF SAME PLACE.

## IMPROVEMENT IN REVERSIBLE LATCHES.

Specification forming part of Letters Patent No. **215,215**, dated May 13, 1879; application filed February 10, 1879.

*To all whom it may concern:*

Be it known that I, JOHN J. DINNAN, of New Haven, Connecticut, have invented an Improvement in Door-Locks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to improvements in that class of door-locks which, by reversing the latch-bolt, can be converted from left-handed to right-handed locks, and vice versa; and my improvement consists in simple mechanism by means of which the said conversion may be readily accomplished, and the latch thereupon made to assume a proper position for use.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side view of a mortise-lock with a portion of one of the side plates removed in order to illustrate my improvements. Fig. 2 shows my improvements connected with the follower in a position differing from that shown in Fig. 1, and with the hub K ready to receive the spindle H. Figs. 3, 4, 5, and 6 show detached portions of my improvements.

Similar letters refer to similar parts throughout the several views.

A represents the lock-case, and B the face-plate of the lock, which, as regards external form, is similar to mortise-locks of the usual construction.

As my improvements are entirely independent of the lock-bolt, tumbler, and key, it is deemed unnecessary to show the same in the drawings.

The usual square spindle, to which are secured the handles or knobs for operating the latch-bolt, passes through and fits snugly in the hubs of the arms D and D'.

One part of the hub K is arranged to turn in the other, and one part to turn in one side plate and the other in the other side plate of the case of the lock. One hub is recessed, as shown in Figs. 4 and 5. The other is made as

shown in Figs. 5 and 6, and so that it will fit snugly in the recessed hub, but so as to turn freely therein, within proper limits, the two hubs fitting together, as best observed on reference to Fig. 6, and so as to form one hub when they are placed in the position shown in Fig. 2.

The hub of one arm is capable of moving independently of that of the other arm to an extent limited by the projections *o* and *o'*, either of which will prevent the arm from being moved farther on when said arm is brought in contact therewith.

The latch-bolt is composed of the usual beveled head E, attached to or forming a part of the stem *e*, the latter being so connected to the sliding yoke G as to turn freely therein, but so that one cannot move longitudinally independent of the other.

The legs *h* of the yoke G have projections *i*, against which bear the arms D and D'. The yoke is guided by the arms D and D' and the hub K when the spindle H is inserted therein.

Connected with the arms D and D', and held in place by suitable attachments thereto or projecting therefrom, is the spring or springs *s*, which may be a spiral or other suitable spring or springs, and may be held in place by the projections *p* and *r* or other suitable device. Although, by preference, I use the projections *p* and *r*, as shown in Figs. 1 and 2, to hold the spring *s* in place, it will be readily seen that a projection from the arm D and a similar projection from the arm D', each projection having a recess fitted to receive one end of the spring *s*, may be used, which projections will, when the two hubs L and T are united in one, and the spring *s* is placed in position, hold the spring and permit the forward movement of the arms when the spindle H is not inserted, as shown in Fig. 1, or that a flat spring may be used, one end of which may be firmly attached to the arm D and the other end to the arm D'.

When the latch E is pulled forward it draws the yoke G and the arms D and D' of the divided hub K, composed of the two parts or hubs, L and T, forward also. The latch E and the arms D and D' may be made to assume substantially the position shown in Fig. 1, in

which position the latch E may be reversed, whereupon, upon releasing the latch E, the spring *s* will force the arms D and D' back to the position in which they appear in Fig. 2, said arms drawing the yoke G and latch E to the position which they usually bear in the case A, and in which position of the arms D and D' and the hub K, the whole being properly incased in the usual manner, the spindle H may be easily inserted, and when it is thus inserted the hubs L and T, with their arms D and D', will be held rigidly. As long as the square spindle H occupies its proper position in the hubs of the two arms D and D' the latter cannot turn independently of each other, but, occupying the position relative to each other shown in Fig. 2, will serve to move the latch inward on turning the handles or knobs attached to the square spindle H, the square head E of the latch-bolt being confined within, guided by, and therefore incapable of turning in, the square opening of the face-plate as long as the spindle H remains in the two hubs L and T, united in the hub K, as in Fig. 2. On withdrawing the spindle H, however, from the hubs L and T the latter are permitted to turn to the limited extent allowed by the projections *o* and *o'*.

By the above-described simple mechanism the lock may readily be made right or left handed at pleasure, and the divided hub or follower be thereupon made to resume the position shown in Fig. 2, and the latch E be drawn back by means of the arms D and D' and the yoke G until it occupies the position in which it is desired that it shall remain in the lock when it is not drawn back by turning the spindle H.

Although I have described my improvements as applied to a mortise-lock, it will be evident that they are equally well adapted to ordinary rim and other locks in which latch-bolts are used.

I wish it to be understood that I do not desire to claim, broadly, converting a left-handed into a right-handed lock, and vice versa, by reversing the latch-bolt, the same having been heretofore accomplished by means of mechanism differing from and more complex or less perfect in its operation than that above described. Neither do I claim, broadly, a divided hub or follower, as a divided hub or follower has been heretofore made; but

I claim as my invention and desire to secure by Letters Patent—

1. The arms D and D', with their hubs L and T, adapted to each other so that one hub may move within the other, and both hubs receive the square spindle H, in combination with the spring *s*, held in place by the projections *p* and *r*, the yoke G, its projections *i* and *i'*, and the latch-bolt E, the latter being connected with and arranged to turn in said yoke, as specified, all substantially as set forth and described.

2. The divided hub or follower K, consisting of the hubs L and T, each fitted to receive the spindle H, with their arms D and D' moving in the same plane, substantially as described.

3. The divided hub or follower K, with the arms D and D', having the projecting parts *p* and *r*, substantially as described.

4. The divided hub or follower K, with the arms D and D', in combination with the spring *s*, arranged so that said arms may be moved by said spring, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN J. DINNAN.

Witnesses:

HENRY G. NEWTON,  
SILAS HULL.