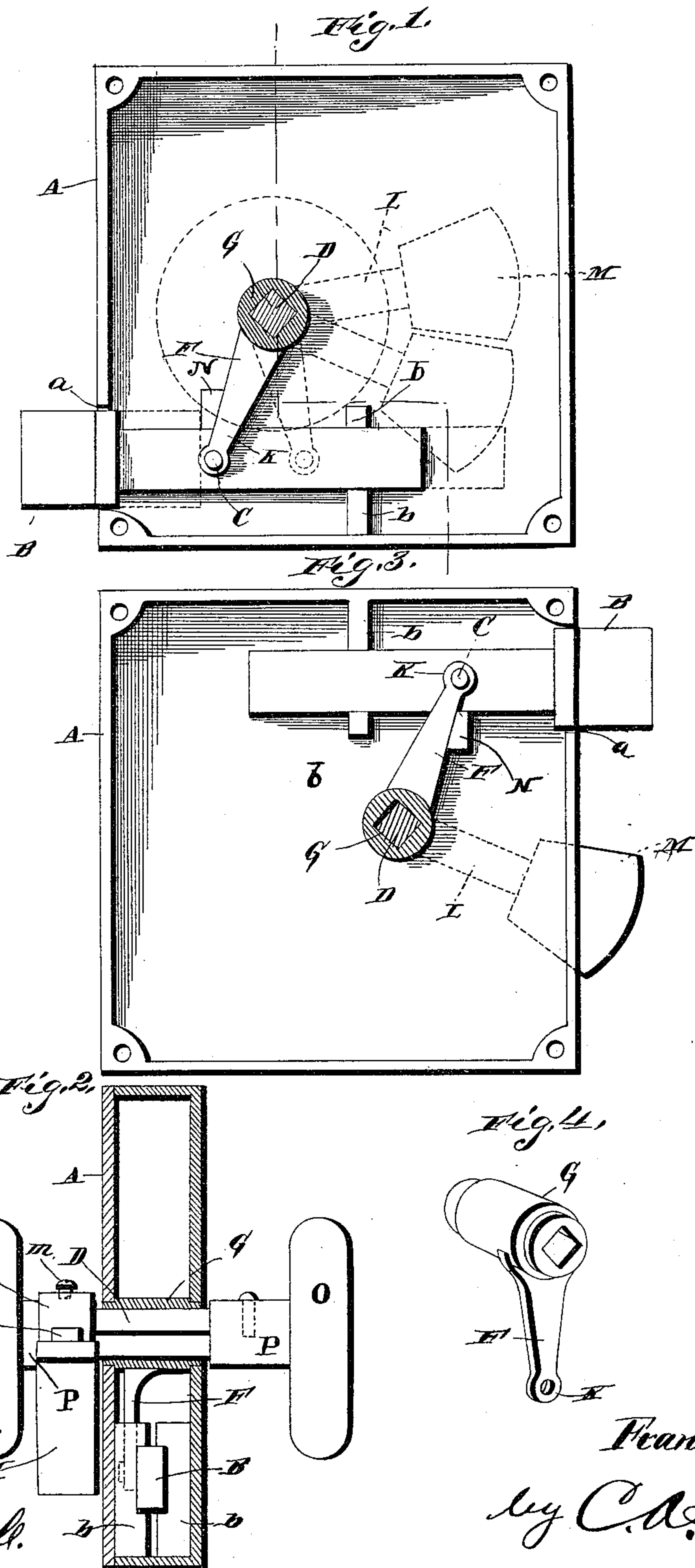


(No Model.)

F. L. PIERCE.
LATCH.

No. 403,554.

Patented May 21, 1889.



UNITED STATES PATENT OFFICE.

FRANK L. PIERCE, OF CLAY CENTRE, KANSAS.

LATCH.

SPECIFICATION forming part of Letters Patent No. 403,554, dated May 21, 1889.

Application filed December 27, 1887. Serial No. 259,114. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. PIERCE, a citizen of the United States, residing at Clay Centre, in the county of Clay and State of Kansas, have invented new and useful Improvements in Latches, of which the following is a specification.

My invention relates to improvements in latches; and it has for its object to provide a simple, cheap, strong, durable, and effective latch suitable for use in any position where an ordinary door-lock is employed, but designed especially for use in locations where a lock is exposed to continued dampness.

The parts of my improved latch are few in number, are simple and strong, and are calculated to withstand rough usage, so that if they become rusted together or to the case they may be detached by force without breaking any of the members.

The invention consists in certain novel details of construction, which are hereinafter more fully described in connection with the accompanying drawings, wherein—

Figure 1 is a side view of the latch with the inner plate removed. Fig. 2 is a transverse section on the line *xx*, Fig. 1. Fig. 3 is a side view showing the latch adapted for use on a left-hand door. Fig. 4 is a detail view of the lever for operating the bolt.

Referring by letter to the drawings, A designates the case of the latch having the bolt-opening *a* in the face, and B designates the bolt, which slides at its rear end between the guide-studs *b b* and projects at its front end or nose through the opening *a* in the case. This bolt is provided with a spindle, C, for a purpose to be hereinafter explained.

F represents a lever or arm, which is provided on one end with a sleeve, G, having a squared central opening, and the said sleeve is mounted at its ends in suitable bearings in the opposite sides of the case.

D represents a squared knob-shaft, which is mounted or fitted in the sleeve G, and therefore when the knob is turned the sleeve and the lever attached thereto are similarly operated. Knobs O O are provided with round barrels P P, which fit on the ends of the knob-shaft. The opposite end of the lever is provided with a loop, K, to embrace and operate

on the spindle C, which is attached, as before described, to the bolt. It will be seen that when the shaft D is rotated the bolt will be operated, and its outward movement is limited by the lever or arm striking against the stop N, which is arranged at a suitable point in the case. One end (or, if so desired, both ends) of the shaft D is provided with an arm, L, at right angles to the shaft, and provided on the one end with a weight, M, and on the other end with the adjustable sleeve M', having a set-screw, *m*. This sleeve is mounted on the knob-shaft, and the set-screw engages therein to hold the arm in the desired position. This arm is shown in Fig. 1 extending rearward from the shaft, and in this position it is evident that the bolt is normally held extended in the engaging position. Therefore if it is desired to disengage the bolt the weighted arm must be raised.

Figs. 1 and 2 show the latch arranged for use on a right-hand door; but if the shaft D is withdrawn from the squared opening in the sleeve and turned so that the arm L assumes a position opposite that previously occupied the case may be reversed and applied to a left-hand door. A lock arranged for use on a left-hand door is shown in Fig. 3.

The sleeve around the shaft may at any time be removed from the same to allow the shaft to be reversed, and therefore the same latch may be applied to either a right or a left hand door. The advantage of this is that in purchasing a number of latches it is not necessary to stipulate the number of right and the number of left hand latches, but simply to name the gross number needed, and they may be adapted to the different doors by the artisans who secure them in place.

I am aware that it is not new to provide weighted knobs for latches, and I do not desire to claim this construction; but it will be understood that the adjustability of the lever-arm enables the power with which the bolt is operated to be regulated, and also enables the latch to be readily reversed, as before mentioned.

Having thus described my invention, I claim—

In a lock, the combination of the case S, provided with an opening, *a*, the guide-studs

b b, and the stop N, the bolt B, operating between the guide-studs and projecting through the opening a, the squared knob-shaft mounted in registering bearings in the sides
5 of the case, the sleeve G, arranged on the said shaft within the case and provided with a lever or arm, F, having a loop, K, engaging a spindle, C, on the bolt, the said lever or arm being adapted to engage the stop N to limit
10 the outward movement of the bolt, and the

weighted arms L, connected to the knob-shaft, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANK L. PIERCE.

Witnesses:

C. W. F. DAMMAST,
J. S. STERLING.