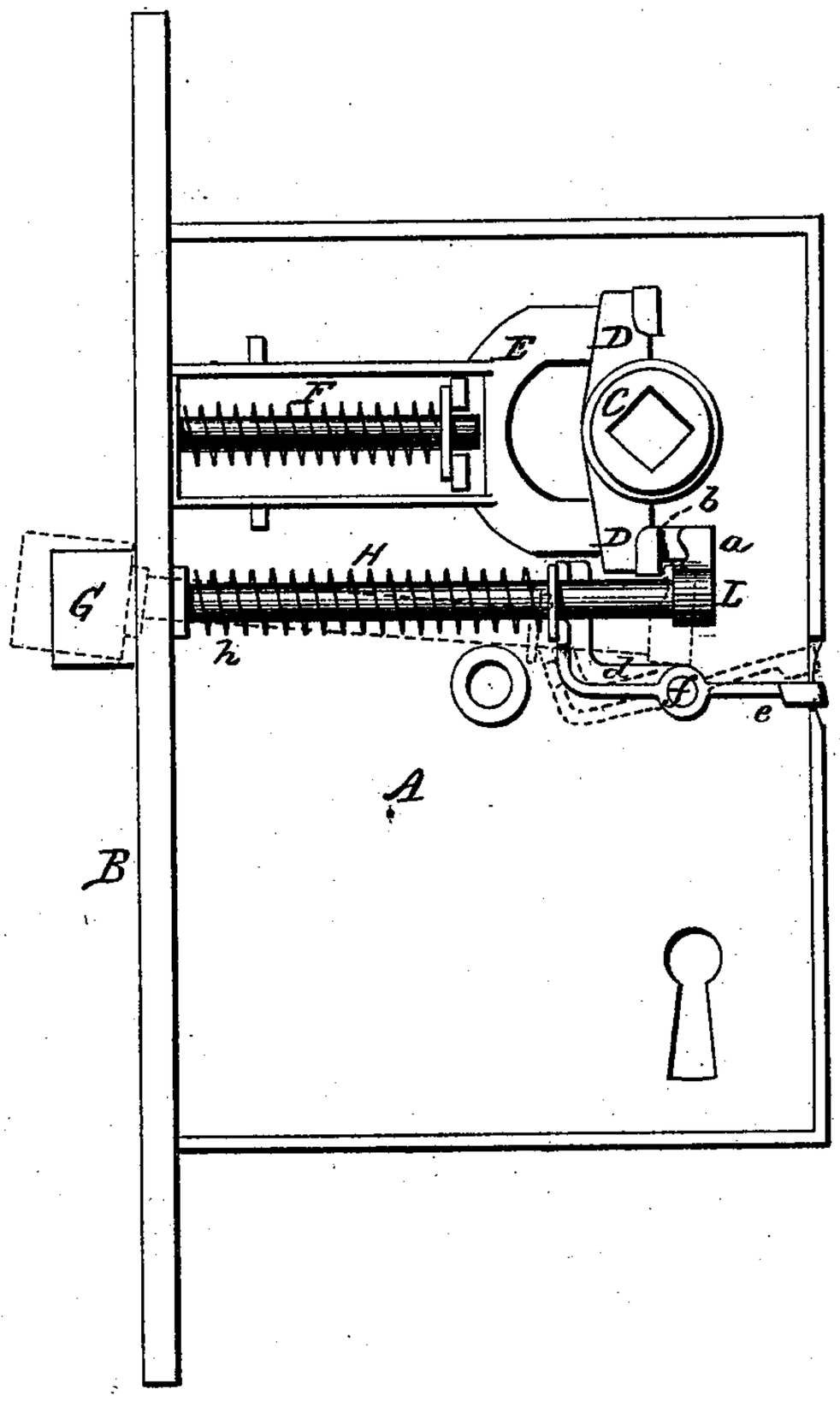
C. S. JENNINGS.

REVERSIBLE KNOB-LATCH.

No. 172,880. Patented Feb. 1, 1876.



Witnesses.

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IMPROVEMENT IN REVERSIBLE KNOB-LATCHES.

Specification forming part of Letters Patent No. **172,880**, dated February 1, 1876; application filed January 4, 1876.

To all whom it may concern:

Be it known that I, CHARLES S. JENNINGS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Reversible Knob-Latches; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent an interior view of the case, showing the latch mechanism.

This invention relates to an improvement in that class of knob-latches in which the turning of the knob draws the bolt within the case, and the nose of the bolt beveled, so as to be automatically forced into the case by the closing of the door, and thrown out by the spring, commonly called "beveled-nose latches," the object of the invention being to construct the mechanism so that the latch-bolt may be reversed to adapt it to a right or left hand door, as the case may be; and it consists in providing the spindle of the bolt with a swivel on its inner end, having an arm to engage a corresponding point on the yoke, combined with a lever hung in the case, and forked upon the spindle, or so that the spindle passes through one arm, with a spring bearing against the said arm of the lever and the head of the bolt, the tendency of which is to force the head of the bolt from the latch-case, and the said lever constructed with an extension through the case, so as to be turned without removing the covering-plate, and such turning moving the spindle from the yoke, so as to disengage the swiveled arm, which will allow the bolt to protrude so far from the case that it may be turned to either position of right or left, and then forced back and automatically re-engaged with the yoke, all as more fully hereinafter described.

A is the latch-case, within which the lock-bolt and its mechanism are arranged in the usual manner. B is the face-plate; C, the hub, with its two arms D D, also of the usual construction. E is the yoke, engaging the arms D D of the hub, in the usual manner, and combined with a spring, F, which forces the yoke forward against the arms, and tends to hold them in a vertical position or state of rest, as shown. G is the head of the latch-bolt, formed upon or attached to a spindle, H, the said spindle extending to the rear of the yoke, and provided with a loose swivel or ring, the swivel constructed with an arm, *a*, and formed so as to interlock with a projection, *b*, on the yoke. Hence, the turning of the hub draws the yoke back toward the hub, and with it draws in the bolt. *d e* are the two arms of a lever, hung upon a fulcrum, *f*, the arm *d* turned up, so as to surround the spindle H of the hub, but yet allow the spindle to play freely when the knob is turned. A spring, *h*, around the spindle H bears against the head of the bolt and the arm *d* of the lever which surrounds the spindle. The spring is, therefore, constantly bearing against the arm *d* of the lever, and the point of bearing of the spring upon the lever is above its fulcrum *f*, so that the pressure tends to force the arm *d* upward.

The arm *e* of the lever extends through the case at some convenient point, here represented as on the rear edge. By raising the arm *e* of the lever the other arm is depressed, as denoted in broken lines, and such movement draws the swivel-arm *a* from its engagement with the yoke; and so soon as this disengagement is effected the spring *h* throws the bolt so far outward, as indicated in broken lines, that the head may be turned, the swivel on the end allowing the spindle to be so turned without turning the swivel; and when the bolt has been turned to the desired point it is forced back into the case, and so soon as the arm *a* has passed to the rear of the yoke, the pressure of the spring *h* turns the arm *d* upward, and carries the spindle up, so that the arm *a* re-engages with the yoke.

By this construction the spring F is the main or principal spring, its office being to return the knobs to their position of rest, and the office of the spring *h* is mainly to hold the latch in engagement, or cause it to return

with the yoke after it has been drawn. Hence, the spring *h* may be a light spring, as compared with the spring F, and thus offer a slight resistance only to the closing of the door.

This device is applicable alike to rim and mortise latches.

I claim—

The combination, in a knob-latch, of the latch-bolt spindle, with the swiveled arm *a* thereon, the lever *d e*, with the yoke E and its operative mechanism, substantially as and for the purpose specified.

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Witnesses:

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