(No Model.)

P. W. FARRAR.

DOOR LATCH.

No. 307,281. Patented Oct. 28, 1884.

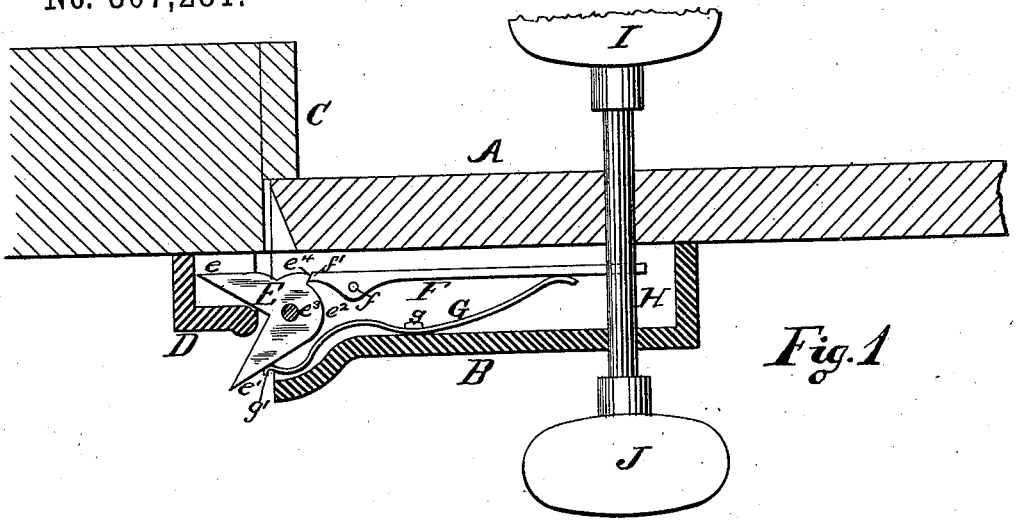

Fig. 1

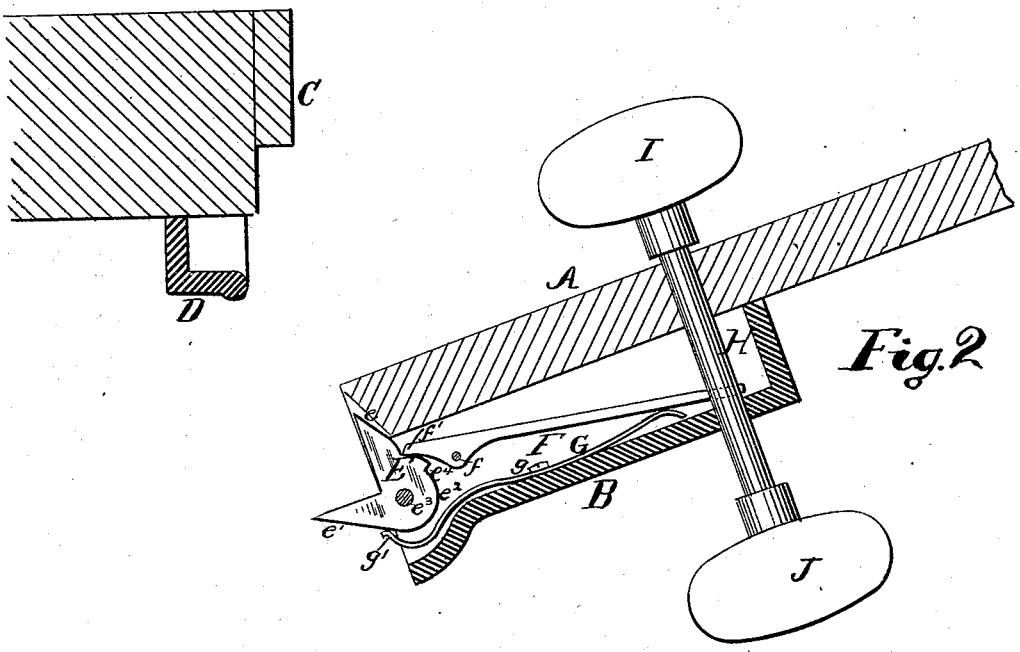

Fig. 2

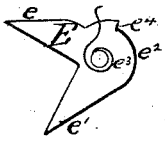

Fig. 3

Witnesses
A. A. Connolly
M. L. Huntemann

Inventor
Preston W. Farrar
by Connolly Bros.
Attorneys

UNITED STATES PATENT OFFICE.

PRESTON W. FARRAR, OF NEVADA, IOWA.

DOOR-LATCH.

SPECIFICATION forming part of Letters Patent No. 307,281, dated October 23, 1884.

Application filed January 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, PRESTON W. FARRAR, a citizen of the United States, residing at Nevada, Story county, Iowa, have invented certain new and useful Improvements in Door-Latches; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a horizontal section of the latch in position upon a door, which is represented as being closed. Fig. 2 is a similar view, the door being opened. Fig. 3 is a modification with spiral spring.

My invention has relation to door latches of that class wherein a sliding stem having a knob at each end is employed, in lieu of the ordinary and well-known form of pivoted lever with hook and thumb-plate.

My invention has for its object the provision of devices of simple construction, neat appearance, and effective operation, and which will, while operated substantially in the manner of the latch ordinarily employed in connection with door-locks, be much less costly than devices of that class.

My invention consists in a pivoted latch-piece set in a case upon the door and operated by contact with a keeper on the door-jamb when the door is closed, and retained in fixed position by means of a pivoted and spring-actuated lever within the case, the releasing of the latch being effected by pulling a knob upon the inside or pushing a similar knob upon the outside of the door.

Referring to the accompanying drawings, illustrating my improvements, A represents a portion of a door, to which the latch-case B is attached.

C is a portion of the door-jamb, and D the keeper secured thereto.

E represents the latch-piece pivoted in the case B and projecting out from the forward end thereof. This latch-piece E is of approximately V shape, and comprises two arms, *e* and *e'*, and a central portion, e^2, which receives the pivot e^3, which may either pass through said central portion, e^2, or be formed integral therewith. The arm *e* of the latch-piece E is adapted to take into and engage with the inside edge of the keeper D, the arm *e'* operating to strike against the outside of said keeper and swing the latch around into its fixed and locked position when the door is closed.

The latch is seen in its locked position in Fig. 1 of the drawings, and in its unlocked position in Fig. 2. In the former position it will be seen that the arm *e* projects out from the case B at nearly a right line, the edge of the keeper D being embraced in the notch between the arms *e* and *e'*.

In Fig. 2 of the drawings the latch is shown as out of engagement with the keeper and swung around within the case until the arm *e* is entirely concealed within the same.

F represents a lever pivoted within the case B at *f*, and provided with a squared or trigger edge, *f'*, which engages with a nick or notch, e^4, in the back of the latch-piece E. The lever F is held in contact with the latch-piece E by a double-ended spring, G, which is secured at or about its center to the front of the case B by a pin, *g*. The spring G also serves to retain the pivoted latch-piece in position while the door is open, its end *g'* pressing against the outer edge of the arm *e'* of said latch-piece.

If desired, a separate spring may be used in connection with the latch-piece E. Where a separate spring is employed, I prefer to construct it as shown in Fig. 3, wherein is represented a spiral spring surrounding the pivot *g* of latch-piece E, and attached at one end to said latch-piece and at the other end to case B.

H represents the shaft or stem, by means of which the lever F is released from engagement with the latch when it is desired to close the door. Said shaft extends through the door and the casing, and has a knob, I, at one end and a similar knob, J, at the other. The end of lever F passes through an opening in the shaft H; or said lever may be connected or attached to said stem in suitable or desirable manner.

The operation of the invention is as follows: Upon grasping the knob to open the door, if the person be on the inside of the same, the pull will draw down the end of the lever F, releasing the other end of the same from its engagement with the notch in latch-piece E. A further pull on the knob causes the arm *e*

of the latch-piece to press against the inner side of the keeper D, and the latch-piece is thereby swung around into the position shown in Fig. 2, allowing the door to open.

To open the door from the outside, it is only necessary to press upon the knob on that side, when the latch-piece is released and the door opened, as before. Upon closing the door the arm c' of latch-piece strikes the edge of the keeper, swinging around the said latch-piece until the lever end F catches in notch, thus securing said latch-piece in position, as before.

I claim—

1. In a door-latch, the combination of a pivoted latch-piece adapted to engage with a keeper upon the door-jamb, a pivoted lever engaging at one end with a notch in said latch-piece, and attached at the other to a sliding stem, and a spring contacting with said latch-piece and lever, and adapted to force said lever into engagement with said latch-piece, and to swing the latter around into position for engagement as the door is opened.

2. In a door-latch, the combination, with a pivoted latch-piece having a notch in its back for the reception of a locking-lever, of a spring engaging with said latch-piece and adapted to turn the latter upon its pivot when released from engagement with said lever, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of January, 1884.

PRESTON W. FARRAR.

Witnesses:
D. J. VINJE,
M. C. ALLEN.