(No Model.)

T. C. H. BAYRHOFFER.

DOOR LATCH.

No. 336,374. Patented Feb. 16, 1886.

Fig. 1.

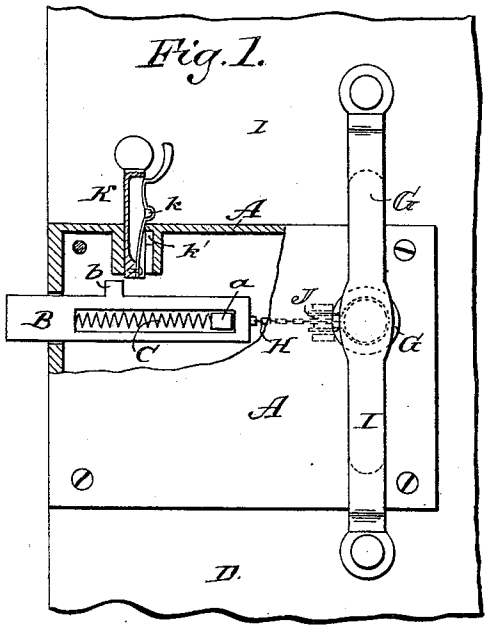


Fig. 2.

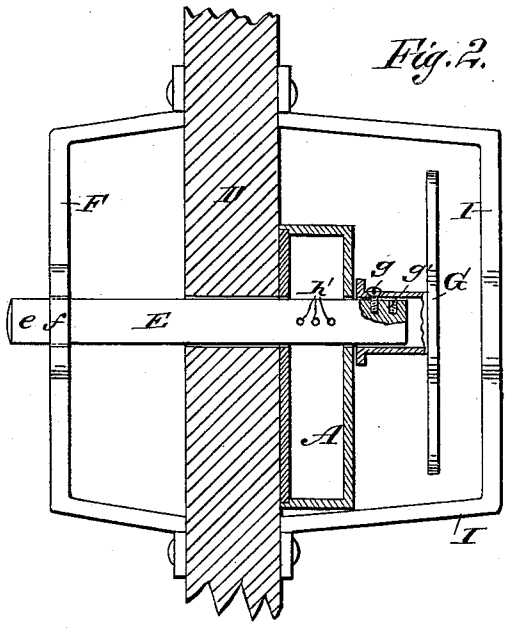
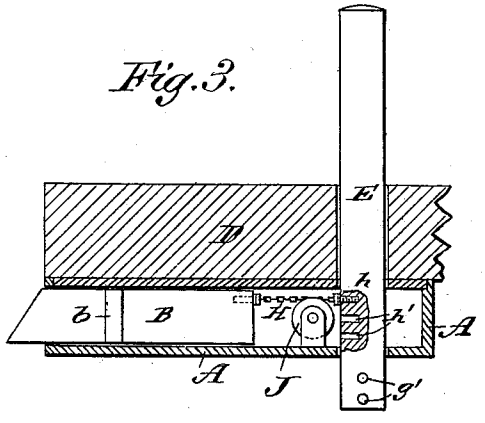


Fig. 3.



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UNITED STATES PATENT OFFICE.

THEODORE C. H. BAYRHOFFER, OF RISING CITY, NEBRASKA.

DOOR-LATCH.

SPECIFICATION forming part of Letters Patent No. 336,374, dated February 16, 1886.

Application filed April 9, 1885. Serial No. 161,690. (No model.)

To all whom it may concern:

Be it known that I, THEODORE C. H. BAYRHOFFER, of Rising City, in the county of Butler and State of Nebraska, have invented a new and Improved Door-Latch, of which the following is a full, clear, and exact description.

My invention relates to latches for doors; and it consists in the peculiar construction and arrangement of parts, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of my improved latch, partly broken away and in section, and shown applied to a door. Fig. 2 is a cross-sectional elevation of the latch and door, and Fig. 3 is a sectional plan view of the same.

The letter A indicates the latch-case, and B is the latch-bolt, which is fitted to slide through the end of the case and over a lug, *a*, on the case, and a spring, C, placed in a slot of the bolt, acts between the forward end of the slot and the lug *a* to shoot the bolt outward into any suitable catch fixed to the jamb or casing of the door D, to which the latch is fixed by screws or otherwise.

Referring now to Figs. 1, 2, and 3, the letter E indicates the spindle, which passes through the latch-case A and door D, and also through an eye or bearing, *f*, of the hand-grasp or plate F, which is fastened to the door at its outside or closing face.

The letter G indicates a pull-plate, which is fastened by a screw, *g*, passing through its central hub to the inside end of the spindle E, and to the spindle is attached by a screw, *h*, or otherwise, one end of a chain or cord, H, the other end of which is connected to the latch-bolt B.

To the face of the door D is fixed the inner hand-grasp, I, which stands a sufficient distance from the pull G to allow said pull to be drawn toward it to move the spindle E lengthwise, and thereby draw on the chain or cord H and withdraw the bolt B from its catch on the casing, to permit opening of the door. At the other side of the door the end *e* of spindle E projects sufficiently beyond the grasp F to allow the spindle to conveniently be pushed inward from the outside of the door, to withdraw the bolt B from its catch, so the door may be opened from the outside. I prefer to journal a roller, J, to the latch-case for the chain or cord H to run over, so as to give a more direct pull on the bolt B and reduce the friction, to make the bolt draw easier.

Two or more holes, as at *g'*, are made in the spindle E to receive the pull-attaching screw *g*, and two or more holes, *h'*, are provided to receive the chain-attaching screw *h*, so that the spindle and its pull G may be adjusted to allow proper projection of the spindle end *e* beyond the grasp F, should the door to which the latch is applied be thicker or thinner, as will readily be understood. A sliding pin, K, having a spring-catch, *k*, may be pressed down behind a stud, *b*, on bolt B, when the bolt is projected, and the catch *k* will spring under a shoulder or lip, *k'*, of the lock-case, to prevent withdrawal of the bolt B from the casing catch-plate and lock the bolt, so the door cannot be opened from the outside. When the catch-pin K is raised, its catch *k* springs above the lip *k'*, to allow the bolt B' to be operated by pressing on the end *e* of the spindle, as hereinbefore explained.

It will be understood that the latch may be operated without using the hand-grasps F I, as the door will open by simply pushing on the end *e* of spindle E, or by pulling on the piece or plate G; but the use of the hand-grasps is preferred.

It is evident that by loosening the connection *h* of the chain H with the spindle E the bolt B may be reversed, the chain H then passing over the roller J, between it and the front plate of the latch; hence the latch is reversible, to suit either right or left hand doors.

The operation of the latch is very simple, as the spindle E does not have to be turned to withdraw the bolt, and the latch may be made cheaply, may be easily applied to the door, and is strong and durable.

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

1. The combination, in a latch, of the case A, bolt B, spindle E, roller J, chain or cord

H, and pull-piece G, substantially as herein set forth.

2. The combination, with a door, of a latch consisting of a case, A, bolt B, spindle E, chain or cord H, connecting the bolt with the spindle, the pull-piece G, fast on the spindle, and the hand-grasp F, fixed to the door and having a bearing, *f*, for the projecting end *e* of spindle E, substantially as herein set forth.

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Witnesses:
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