

United States Patent Office.

GEORGE H. PALMER, OF NEW BEDFORD, MASSACHUSETTS.

Letters Patent No. 67,795, dated August 13, 1867.

IMPROVEMENT IN MORTISE KNOB-LATCHES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE H. PALMER, of New Bedford, in the county of Bristol, and State of Massachusetts, have invented a new and improved Mortise-Latch; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved mortise-latch for doors, &c.; and it consists in a new and improved manner of attaching or connecting the latch to the hub of the door-arbor, as hereinafter fully shown and described, whereby the latch, in case of the door being closed while the hand of the operator is upon the knob, may be forced back and made to catch into or engage with the nosing or strike equally as well as if the knob were perfectly free.

Figure 1 is a longitudinal section of my invention taken in the line *x x*, fig. 2.

Figure 2, a longitudinal section of the same taken in the line *y y*, fig. 1.

Figure 3, a transverse section of the same taken in the line *z z*, fig. 2.

Similar letters of reference indicate like parts.

A represents the case of the latch, which is of cylindrical form so that it may be inserted in a door by simply boring an auger hole therein. This case is composed of equal longitudinal parts *a a*, connected at their ends by bands *b b*. B is the latch, bevelled at one side, as shown at *c*, and having two plates, *d d*, attached, one at its upper and the other at its lower side, said plates working in grooves *e e* in the inner surface of the case, and serving as guides for the latch, as will be fully understood by referring to fig. 3. The latch is connected by two links C D to the hub E, through which the knob-arbor F passes. This hub is arranged in the usual way, and the link D is connected to it by a pivot, *f*, the other link C being connected to the latch B by a pivot, *g*. The two links C D are also connected by a pivot, *g'*, the latter passing through an oblong slot, *h*, in the link D. The link C is formed of two plates *i i*, so that it may be moved towards the hub E without affecting the link D, the plates *i i* working each side of D, as will be fully understood by referring to fig. 2. The plates *i i* of the link C are each connected by a spiral spring, *j*, with the outer end of the case A, and these springs have a tendency to keep the latch B forced outward from the case, as will be fully understood by referring to fig. 2. In opening the door the knob G on the arbor F is turned as usual in order to draw in the latch B free from the nosing or strike in the door-frame, and in closing the door the latch B will be forced or pressed inward in consequence of its bevelled side *c* coming in contact with the nosing or strike, and it will be seen that the latch may be thus pressed or forced inward without turning the hub E of the knob-arbor, as the link C is allowed to slide over or upon the link D, the pin or pivot *g'* of C working in the slot *h* in D. Hence, if the knob G be held by the operator in closing the door it will not affect in the least the free inward movement of the latch in the case.

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

1. The cylindrical lock-case A, constructed as described, consisting of the longitudinal sections *a* secured together by means of the rings *b*, as herein set forth for the purpose specified.

2. The latch B, having upon its upper and lower sides the guiding-plates *d d*, sliding in grooves *e e*, of the case A, arranged in relation with the dove-tailed pivoted link C, slotted pivoted link D, springs *j j* upon opposite sides of the link C, and the slotted hub E, as herein set forth for the purpose specified.

3. The latch B, when provided with the guiding-plates *d*, sliding in the grooves *e e* of the lock-case A, as and for the purpose specified.

The above specification of my invention signed by me this 6th day of February, 1867.

GEO. H. PALMER.

Witnesses:

ALEX. F. ROBERTS,
O. MACDANIEL.