(No Model.)

W. F. OLIVER.

DOOR LATCH.

No. 295,795. Patented Mar. 25, 1884.

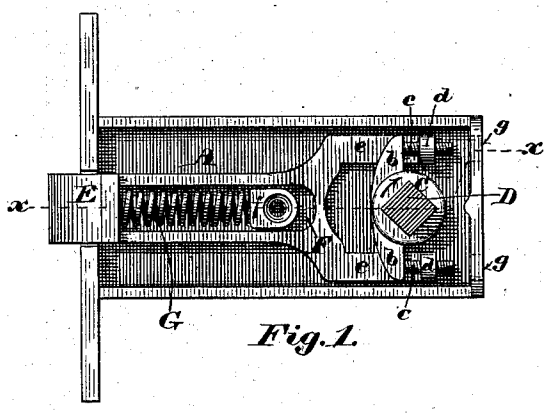


Fig. 1.

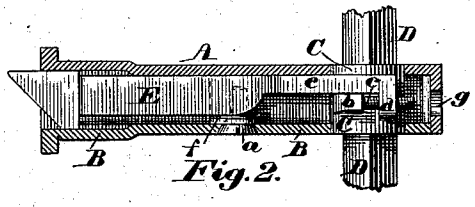


Fig. 2.

Witnesses:
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E. A. Hemmenway

Inventor:
Willard F. Oliver,
by N. P. Lombard
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UNITED STATES PATENT OFFICE.

WILLARD F. OLIVER, OF LYNN, ASSIGNOR OF ONE-HALF TO MELLEN BRAY, OF NEWTON, MASSACHUSETTS.

DOOR-LATCH.

SPECIFICATION forming part of Letters Patent No. 295,795, dated March 25, 1884.

Application filed January 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLARD F. OLIVER, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Mortise Door-Latches, of which the following, taken in connection with the accompanying drawings, is a specification.

It often happens that the front edge of a door, from shrinkage or some other cause, will be withdrawn from the door-frame a distance sufficient to prevent the bolt of the door-latch from entering the socket made in the door-frame for the purpose, in order that the door may be secured in a closed position. To overcome this difficulty without removing the door from its hinges, as is necessary in order to splice the hinge-stile of the door, or without setting over the door by placing shims between the hinges and the door or the door-frame to accomplish this same purpose, is the object of my invention, which consists in providing a mortise door-latch of the usual construction with a suitable device whereby the bolt thereof may be adjusted toward or away from the front edge of the door to which it is attached, which device will readily be understood by reference to the description of the drawings, and to the claims to be hereinafter given.

Of the drawings, Figure 1 represents a side elevation of an ordinary door-latch with one side of the casing removed and with my invention applied thereto; and Fig. 2 represents a plan of the same, with the casing cut in section on line *x x* on Fig. 1.

The casing of the door-latch shown in the drawings is made in two pieces, A B, which are secured together by the screw *a* in a well-known manner. The casing A B is provided at one end with a suitable flange, by which said casing may be secured to the door by suitable screws. Near to the opposite end of the casing, the two sides thereof are provided with suitable bearings, in which may be rotated the collar C, mounted upon the shank D, to which the knobs (not shown) of the door are attached. The collar C is provided on opposite sides thereof with two arms or projections, *b b*, one of which, at every partial rotation of the knob, engages with a co-operating screw, *c*, mounted in the ear *d* of one of the forked arms *e* of the bolt E, which bolt is provided with a suitable slot, F, into which projects, near that end which is furthest from the edge of the door, the lug *f*, into which the screw *a* is secured to unite the two sides of the casing. Between the end of the slot F which is nearest the front edge of the door and the lug or projection *f* the spring G is placed, the object of which is to press the beveled end of the bolt E outwardly from the front edge of the door. The end of the casing opposite the screws *c c* is provided with two openings, *g g*, which are each placed directly opposite to one of the screws *c*, so that the said screw may be adjusted to and from the projection *b* of the collar C without dividing the casing.

All the parts being in the position shown in the drawings, the operation of my invention is as follows: If the shank D is turned in the direction indicated in the drawings by the arrow, the upper projection *b* engages with its co-operating screw *c* and moves the bolt E against the tension of the spring G toward the interior of the casing a distance sufficient to disengage the outer end of the said bolt from the socket in the door-frame, so that the door may be opened. As soon as the pressure is withdrawn from the shank D, the spring G will force the bolt E outwardly from the front edge of the door until both of the screws *c c* come into contact with the projections *b b* of the collar C. It will thus be seen that the screws *c c* regulate the distance the beveled end of the bolt E may extend outwardly from the front edge of the door, so that if, now, as the parts are shown in the drawings, the beveled end of said bolt does not extend outwardly from the front edge of the door a distance sufficient to cause it to engage with the socket in the door-frame, the screws *c c* may be adjusted in the ears *d d*, so that less distance will remain between the said ears *d d* and the projections *b b*, and the bolt may be pressed farther outward by the tension of the spring G a distance sufficient to allow of the effectual latching of the door. It is obvious

that if the shank D is turned in the opposite direction, the lower projection *b* will act against its co-operating screw, and the same operation will take place.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A door-latch provided with a spring-actuated bolt, the forked arms of which are provided with suitable ears, in which are mounted adjusting-screws which co-operate with the arms upon a collar secured to the shank, upon which the knobs are mounted, substantially as and for the purposes described.

2. In a door-latch, the combination of the two-part casing A B, provided with the lug *f*, the collar C, the shank D, the forked bolt E, provided with the slot F, the spring G, the ears or projections *b b*, and the adjusting-screws *c c*, mounted in suitable ears upon the bolt E, all adapted to operate substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of December, A. D. 1883.

WILLARD F. OLIVER.

Witnesses:
E. A. HEMMENWAY,
WALTER E. LOMBARD.