

(No Model.)

J. M. COFFIELD.
LATCH.

No. 495,624.

Patented Apr. 18, 1893.

Fig. 1.

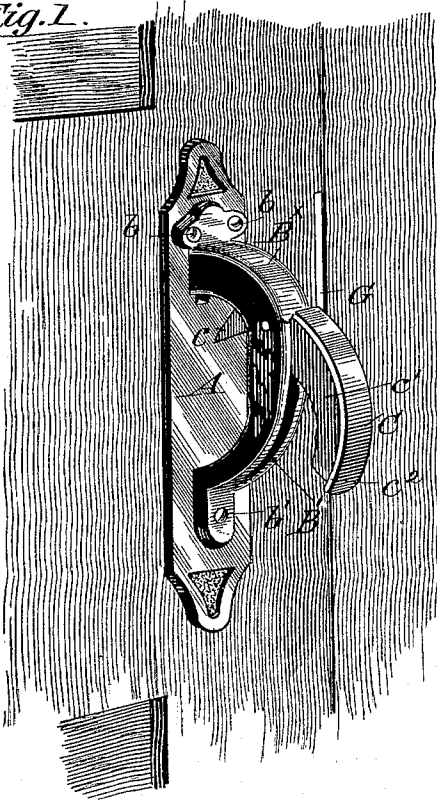


Fig. 2.

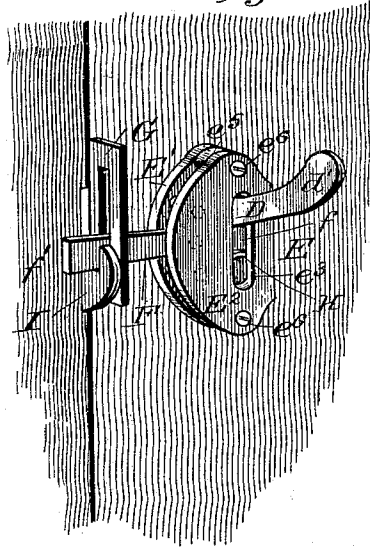


Fig. 3.

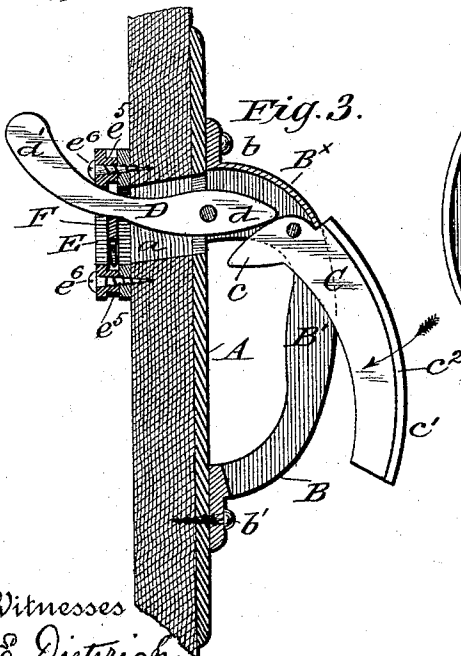
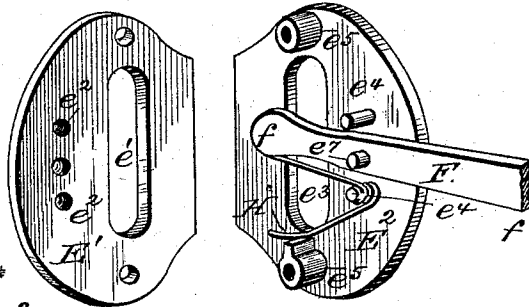


Fig. 4.



Witnesses
A. E. Dieterich
J. N. Bradley

Inventor
Jesse M. Coffield
By John M. O'Meara
Attorney

UNITED STATES PATENT OFFICE.

JESSE M. COFFIELD, OF BELLAIRE, OHIO, ASSIGNOR OF ONE-HALF TO
JOSEPH H. STEELE, OF SAME PLACE.

LATCH.

SPECIFICATION forming part of Letters Patent No. 495,624, dated April 18, 1893.

Application filed December 22, 1892. Serial No. 456,054. (No model.)

To all whom it may concern:

Be it known that I, JESSE M. COFFIELD, residing at Bellaire, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Door-Latches, of which the following is a specification.

My invention has for its object to provide a simple, inexpensive and easily manipulated door latch, which is more especially adapted for use for stores, school buildings or other public buildings where latches are used.

It has also for its object to provide a door latch in which the latch lifting operation is effected as the door handle is grasped, without the use of the usual thumb piece.

With other minor objects in view, and which will hereinafter be referred to, my invention consists in the peculiar combination and novel arrangement of parts, all of which will hereinafter be fully described in the specification and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:

Figure 1 is a perspective front view of my improved door latch. Fig. 2 is a perspective rear view of the same. Fig. 3 is a longitudinal section thereof; and Fig. 4 is a detail perspective view of some of the parts detached.

In the accompanying drawings, A indicates the front or escutcheon plate on which is secured the handle B, which is preferably of the shape shown in Fig. 1 and is held on such plate by the two screws *b b* at the top, and the screw *b'* at the bottom, which screws enter the door and serve to hold the plate A and handle B securely in place.

By referring more particularly to Fig. 3, it will be noted that the handle B is slotted longitudinally to form a chamber B', the upper portion of which has a cover portion B^x, as shown.

C indicates a pusher member, which is pivoted in the chamber B' at a point just under the lower end of the cover plate B^x; such member has a nose piece *c* which projects inward, and a hand portion *c'* which projects normally outward from the handle proper, as shown, it also having lateral flanges *c²* which lap the side edges of the handle, when such member is pushed rearward in the manner presently described.

Pivoted in the upper end of the chamber B' and projected rearward through the aperture *a* in the door body, is the latch unlocking or tripping lever D, which is formed with a toe piece *d* which normally rests upon the nose piece *c* of the pusher member C, as most clearly shown in Fig. 3, while its rear portion is extended, passes through the latch casing E and terminates in an upturned finger portion *d'*.

The latch casing E, the construction of which is most clearly shown in Fig. 4, consists of a base plate E', having an elongated slot *e'* to register with the door opening *a*, and sockets or indentations *e²*, and an outer plate E², which has a similar slot *e³* and which has a pair of studs *e⁴* which project into the indentations *e²*, and bosses *e⁵* at the top and bottom which bear against the lower plate and serve to hold such plates E' and E² spaced apart, such bosses being apertured to admit of the passage of the securing screws *e⁶*, the lower plate also having apertures through which such screws pass.

F indicates the latch which passes out from the casing E between the studs *e⁴*, is pivoted on a stud *e⁷* intermediate the studs *e⁴*, and has its inner or head portion *f* extended under the tripper D, while its foot or lock portion *f'* passes through the slotted guard plate G, as shown; such latch being normally held in engagement against the tripper D by the spring H, which is secured to the lower stud *e⁴* and bears against the under side of the latch, as most clearly shown in Fig. 3. By providing two studs *e⁴* arranged one to each side of the pivot stud *e⁷*, it is manifest that the casing can be turned around for either a right or left hand door, and the spring adjusted onto the proper one of the studs *e⁴*.

The slotted guard plate G, it will be noticed, is a distinct portion from the remaining latch devices, so as to admit of its being adjusted to suit different widths of door stiles.

I, indicates the keeper which is secured to the door jamb, and is of the ordinary construction.

The manner in which my improved latch operates, is best understood by reference to Fig. 3 of the drawings, from which it will be seen that as the several parts are normally in

the position shown, as soon as the handle is grasped, the palm of the hand will force the pusher member inward, which will cause its nose portion to lift the toe of the tripper D, thereby forcing its rear end down and causing the rear end of the latch to be depressed and in consequence raise its outer end out of the keeper, it being obvious that as soon as pressure is released from the pusher member, the spring actuated latch will engage the tripper and set it to force the pusher arm to again assume its outer or projected position.

When it is desired to operate the door from the inside, it is only necessary to pull down on the tripper D.

From the foregoing, taken in connection with the drawings, the advantages of my improved door latch will readily appear. The same is exceedingly simple in construction and operation, as it can be operated by any child tall enough to reach the handle, as it is only necessary to push against the member C to cause the door to open.

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

1. A door latch, comprising a latch bar, a handle portion, having a pivoted pusher member projected normally outward from the body thereof, and an intermediate tripping lever engaging such latch bar and the pusher member, all arranged substantially in the manner shown, whereby the pusher member will operate to trip the lever and latch bar when forced inward, as and for the purpose described.

2. In a door latch, in combination, a handle on one side of the door, a latch casing on the opposite side, a latch bar pivoted in such casing, a tripping lever engaging said latch bar, and projected through the door, and a pusher member pivoted to the handle and having its main or body portion normally pro-

jecting outward from the handle, and a nose piece engaging such tripping lever, all substantially as shown and described.

3. In a door latch, the combination with a handle having a longitudinally slotted portion, a pusher member pivoted in the upper end of such slotted portion, its lower end projected to the front of such handle, its upper end having a nose portion, and a latch bar pivoted to the rear of the door, of a tripping lever independently pivoted to the doorframe, having a rearwardly extending handle portion, engaging the latch bar, and a forwardly extending toe portion engaging the nose end of the pusher member, all substantially as shown and described.

4. In a door latch, the combination with the handle B, the pusher member C having a nose piece *c*, and the casing E on the rear of the door, of the latch bar F pivoted in the casing E, having a head part *f*, and the tripping lever D having a toe *d* engaging the nose *c* of the member C, and a rearwardly extended finger portion *d'* projected through the casing E and normally resting on the head *f* of the latch bar F, all substantially as shown and described.

5. As an improvement in door latches, a latch casing E, consisting of two plates *E'*, *E''*, having coincident slots *e*, *e'*, a latch lever pivoted between such plates, studs on the casing at each side of the pivot of such lever, said lever having a head portion *f*, a spring secured to one of such studs and engaging the said head *f*, the tripping lever D, engaging such head *f*, the handle B, and the pusher member C, all arranged substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JESSE M. COFFIELD.

Witnesses:

FRANK S. MANN,
JOS. STEELE.