

(No Model.)

L. E. JACOBUS.
LATCH.

No. 510,176.

Patented Dec. 5, 1893.

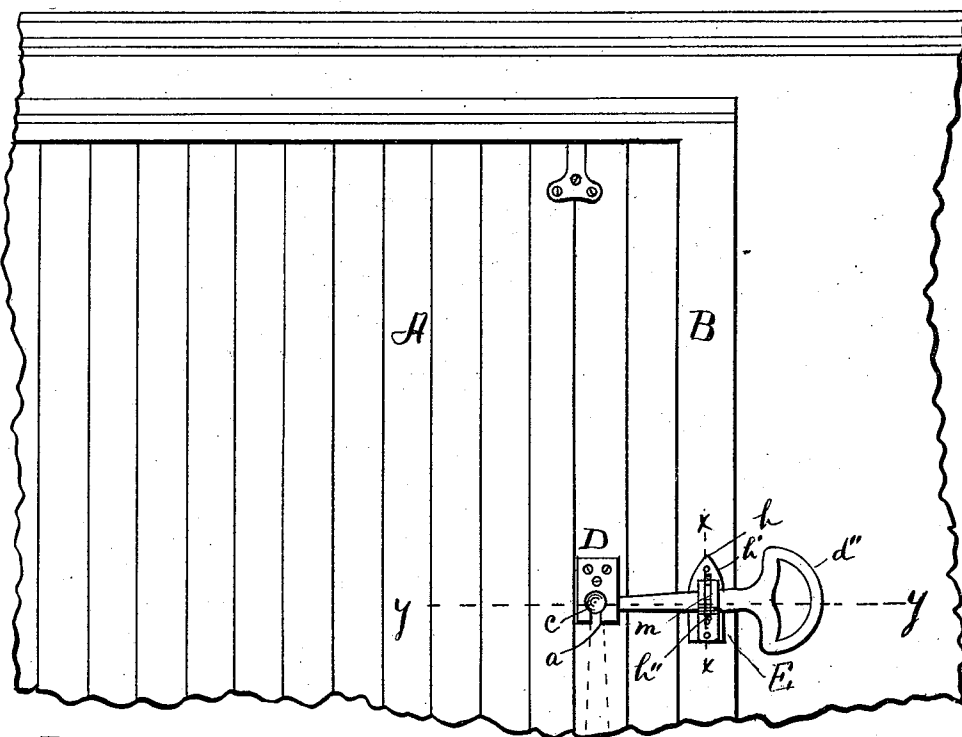


Fig. 1.

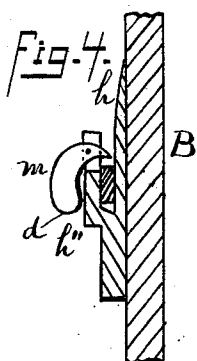


Fig. 4.

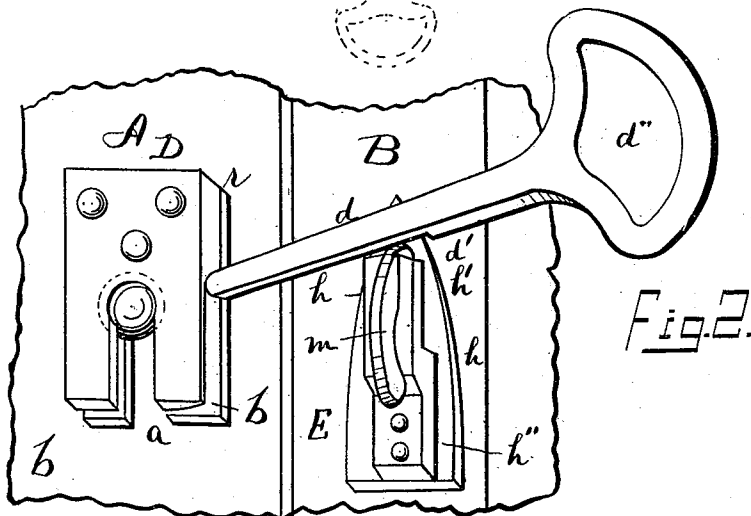


Fig. 2.

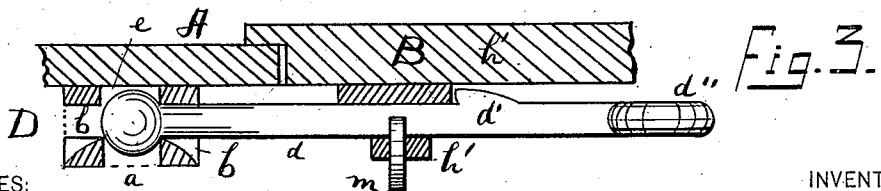


Fig. 3.

WITNESSES:

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LATCH.

SPECIFICATION forming part of Letters Patent No. 510,176, dated December 5, 1893.

Application filed December 12, 1892. Serial No. 454,968. (No model.)

To all whom it may concern:

Be it known that I, LYMAN E. JACOBUS, of Romulus, in the county of Seneca, in the State of New York, have invented new and useful Improvements in Latches, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to latches and locks, combined, adapted to both securely latch or lock a door to its post or casing; and also to draw the same tightly against the stile, or to draw together and latch or lock the meeting rails of two window sashes.

My object is to produce a latch or lock, in which the latching or locking lever is mounted at one end in a universal bearing, and intermediate to its length is provided with a shoulder adapted, when the lever is swung, to engage with a cam upon the latch plate, substantially simultaneous with the entrance of said lever into its recess in said latch plate, whereby said lever is caused to draw the door, or other article to which it is connected, in the line of the lever, said latch plate being also provided with means whereby said latch is secured detachably in its recess in the latch plate.

My invention consists in the several novel features of construction and operation hereinafter described and which are specifically set forth in the claims hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1, is a front elevation of part of a sliding door, as a car door, its stile and the latch or lock in the locked and latched position. Fig. 2, is a plan perspective of the same parts, showing the latch just about to enter the recess in the latch-plate. Fig. 3, is a sectional elevation on line *yy*, in Fig. 1. Fig. 4, is a like view on line *xx*, in Fig. 1.

A, is a sliding door, as a car door; and —B— is its casing, all of ordinary construction, or these letters of reference may also indicate the meeting rails of two window sash, or a sash and part of its casing.

D—, is the latch lever bearing consisting of a block, grooved in one end upon transverse lines, as at —a— and —b—, said grooves at their intersection within the block being enlarged so as to create a bearing for the ball

—c— upon the lever —d—, the opening —e— is the rear face of said block being large enough to permit the insertion of the ball from that side, the shank of the lever fitting loosely in said groove. Said lever is provided with a transverse shoulder or lug —d'—, on one side, and also with a handle —d''— upon its free end, when desired.

E—, is the latch-plate, comprising a back-plate —h— tapering toward the top and creating the cams —h'— on opposite sides, so as to be right or left-handed, and having a bracket-like projection and arm —h''— creating the latch-lever recess between it and the back plate; so that when said lever is forced down into said recess, its shoulder will engage with one of said cams, and draw the door toward the casing, until, when tight, the lever is seated in said recess. As a means of holding said lever therein, a pawl —m— is pivoted in or upon said bracket arm, its beveled point projecting into said recess, so that it is swung by the entrance of the lever, and by gravity assumes the position shown in Fig. 4, when said lever passes it, its projecting point then serving to retain said lever in its seat, until the pawl is operated by hand to release it.

It will be readily seen that if the lever is dropped to a vertical position as shown by the dotted lines in Fig. 1, it can then be swung into any of the grooves, so that it and said block, are also right and left-handed. Said block can also be made in two pieces, if desired, with part of the ball bearing in each, as indicated by the dotted line *r* in Fig. 2.

The grooves —a— and —b— are cut, or cast, into the block in such manner that they intersect each other, each being open outwardly, and of such size as to freely receive the shank of the latch-lever, its head —c— having its bearing at their intersection and is rotatable therein. In Figs. 1, 2 and 3 the lever is shown as projecting to the right, to lock the right-hand edge of the door, its strain being on a line transverse to the screws which hold the block in place. To lock the left-hand edge of a sliding door, the block and latch-plate being mounted in proper relation upon the door and casing, the lever is allowed to drop to a vertical position, as shown by the dotted lines in Fig. 1, and is then swung upward to the left and into the groove —b— on that side

and the latch-lever will then project to the left upon a line transverse to the block-securing screws; and to lock a swinging door, the block is secured upon the door, the latch-plate being secured upon the inner face of the door-post, and the latch-lever is swung from the pendent position, forward or outwardly into the slot —a— and will then stand substantially at a right-angle to the door, and in a line substantially parallel with that of the axes of the block-securing screws. From this it will be seen that the latch is universal, in that it can be set up and operated, right or left handed, or to the front, to lock either sliding or swinging doors.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A latch or lock, comprising a bearing block, provided with transverse grooves substantially as shown creating a bearing therein, a latch lever having a bearing therein and adapted to be shifted from one slot to another and a latch plate recessed to receive said lever, in combination.

2. A latch or lock, comprising a bearing

block, provided with transversely intersecting grooves creating a universal bearing therein, a latch lever having a bearing therein and adapted to be shifted from one slot to another, a shoulder upon said lever, and a latch-plate recessed to receive said lever, and having a cam face, with which said shoulder engages, in combination.

3. A latch or lock comprising a bearing block, provided with transversely intersecting grooves creating a universal bearing therein, a latch lever having an end bearing therein and adapted to be shifted from one slot to another and retained therein by the lateral walls thereof, a shoulder upon said lever, and a latch-plate recessed to receive said lever, and having a cam face, with which said lever engages, and means to detachably secure said lever in said recess, in combination.

In witness whereof I have hereunto set my hand this 1st day of December, 1892.

LYMAN E. JACOBUS.

In presence of—

HOWARD P. DENISON,

C. B. KINNE.