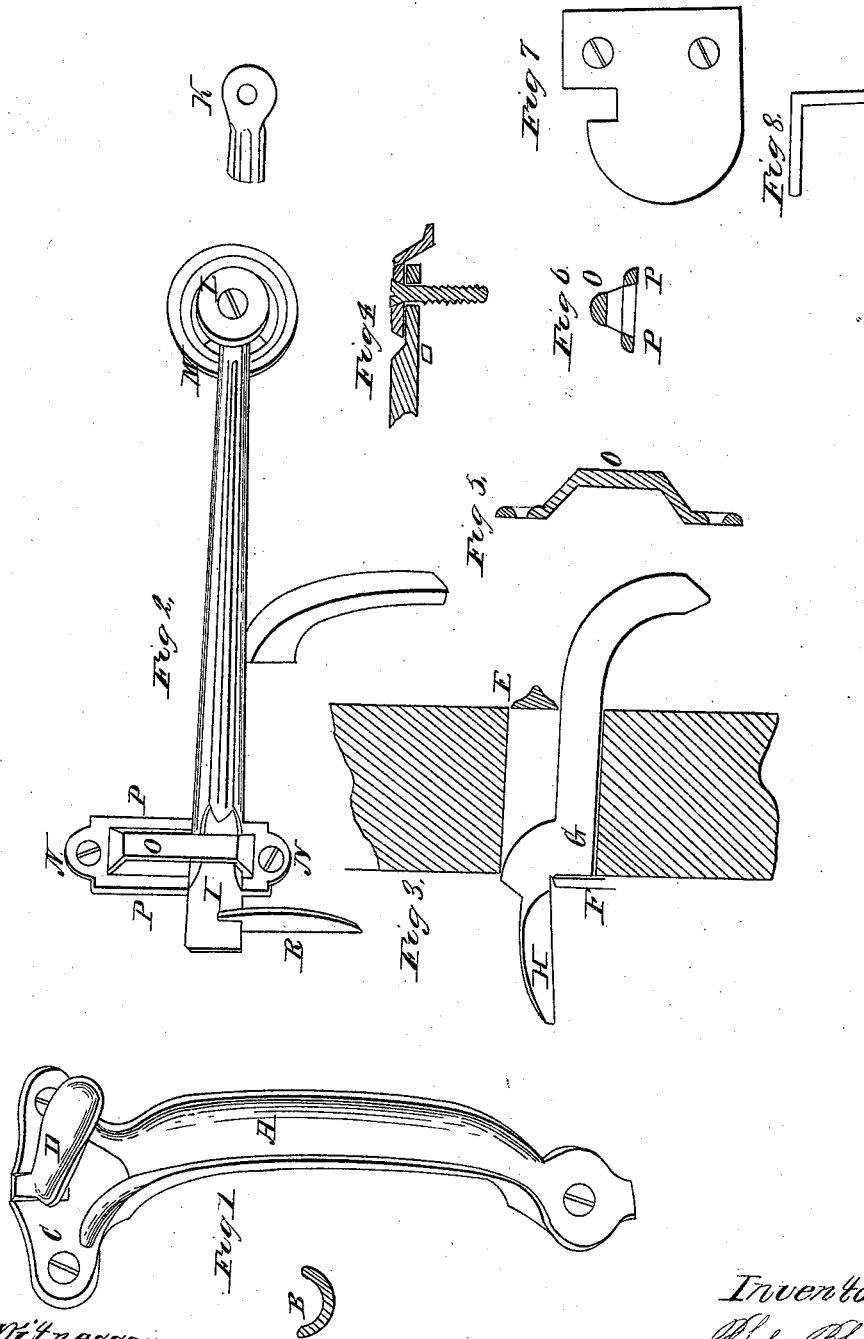


P. E. W. & J. A. Blake,

Latch.

N^o 1,704.

Patented July 21, 1840.



Witnesses
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IMPROVEMENT IN THE CONSTRUCTION OF THE COMMON THUMB-LATCH.

Specification forming part of Letters Patent No. **1,704**, dated July 21, 1840.

To all whom it may concern:

Be it known that we, PHILOS BLAKE, ELI W. BLAKE, and JOHN A. BLAKE, of New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in the Construction of the Common Thumb-Latch, sometimes called the "Norfolk Latch;" and we do hereby declare that the following is a full and exact description thereof.

Our improvements consist chiefly in certain modifications of the form and structure of the several parts of the latch with a view to combine greater neatness of appearance with a susceptibility of being more cheaply manufactured.

Figures 1 and 2 are perspective views of the improved thumb-latch as it appears on the two sides of the door, respectively. A is the handle, which is hollowed out on the outside, as shown by the horizontal section B, in order to combine lightness with strength, and with a sufficient degree of breadth and curvature to feel pleasant to the hand. C is the base or plate of the handle, having a notch or slit in its upper edge to receive the shank of the thumb-piece D, which rests upon the bottom of this slit, constituting its fulcrum, and is kept down upon the fulcrum by the wood at the top of the mortise in the door through which the shank passes.

Fig. 3 is a side view of the thumb-piece, showing at E a section of the latch resting upon its shank and at F a part of a section of the plate of the handle, the red lines showing a section of the door and of the mortise through it, to receive the shank of the thumb-piece. The shank G of the thumb-piece is crooked or offset downward immediately behind the handle-plate, as shown in the figure, to prevent it from moving endwise toward the handle, while its head or concave plate H, extending laterally each way on the other side of the same plate prevents its moving in the other direction. The offset of the shank is also designed to form a stop to prevent it from falling too low when the mortise through the door is cut too low to stop it, also to bring the point where the latch bears upon it on a level with the fulcrum. I is the latch, which is ribbed on the outside, as shown by the section of it at E, Fig. 3, in order to combine

neatness, lightness, and strength. K is a view of the end of the latch, which is partly concealed by the pivot-plate. L is the pivot-plate. This is a circular piece whose central part is elevated from the surface of the door, forming a cavity beneath it. Through the sloped side of the elevated part is an opening into the cavity of sufficient size to permit the pivot end of the latch to pass freely in. Through the top of the elevated post and at its center is a hole for a common wood-screw, which screw passes through the end of the latch, constituting its pivot, and, screwing into the door, firmly secures the plate, while it leaves the latch at liberty to play with perfect freedom. At the same time the outer rim of the plate at M, being beneath the latch, furs it off from the door to prevent it chafing the paint.

Fig. 4 is a section of the pivot-plate through the opening, showing the end of the latch in its place with the screw passing through it.

N N is the staple, of which Fig. 5 is a longitudinal and Fig. 6 a transverse section. The bar O governs the latch on the outside, and the two bars P P support and fur it from the door on the other side. These bars, as shown in the figures, are so arranged that the bar O shall not be immediately over or opposite to either of the others, by which arrangement it is made susceptible of being easily and neatly cast in a single piece, furnishing a guide and support for the latch on both sides. One of the two bars P P might be dispensed with, but with some sacrifice of symmetry and neatness. R is the catch, which is partly concealed in the rabbet of the door-post.

Fig. 7 is a side view of the catch, showing the whole of it. It is a plate of uniform thickness let into the rabbet of the door-post, projecting a suitable distance beyond it to receive the latch, and secured by two screws; or that part which receives the screws may be set at right angles to the other part, as shown by a section, Fig. 8, and screwed onto the face of the post. Constructed in either of these modes the catch may be brought nearer to the staple than when made in the usual manner, whereby the strain on the latch is reduced and its required length diminished, and also such a form may be readily given to

that part which projects from the post to receive the latch as will prevent it from catching and tearing clothes.

In the construction of the thumb-latch, as above described we claim as our invention, and wish to secure by Letters Patent, the following particulars, to wit:

1. The inserting the shank of the thumb-piece in a slit or notch instead of a mortise in the handle-plate, combined with the resting it upon the lower end of that slit as a fulcrum, as herein described.

2. The resting of the thumb-piece upon its lower edge as a fulcrum, combined with the mode of confining it to its place on that fulcrum, as herein described—to wit, by the wood at the upper end of the mortise through the door.

3. The crooking or offsetting the shank of the thumb-piece downward, as herein set forth, for the purpose of forming a shoulder upon its lower edge to rest against the back side of the handle-plate and to bring the bearing of the latch upon it more nearly on a level with the fulcrum.

4. The mode herein described of making and securing the pivot-plate—that is to say,

making it hollow with an opening on one side for the latch to pass through and securing it by a screw, which at the same time passes through the latch and constitutes its pivot, as herein described.

5. The manner herein described of forming the staple—that is to say, removing that part of its plate which is behind the outer or front bar, thus admitting of that bar and the plate being readily cast in one piece, as herein set forth.

6. The modes herein described of forming the catch, either making it of a simple straight plate to be let into and screwed within the rabbet of the door-post, or of a plate bent at right angles to be screwed on the face of the door-post, thereby allowing it in either case to stand in a line with or close to said rabbet, and consequently admitting of the shortening of the projecting end of the latch.

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