D. N. Ropes,

Door Latch.

No. 414. Patented Sep. 28, 1837.

Fig. 1

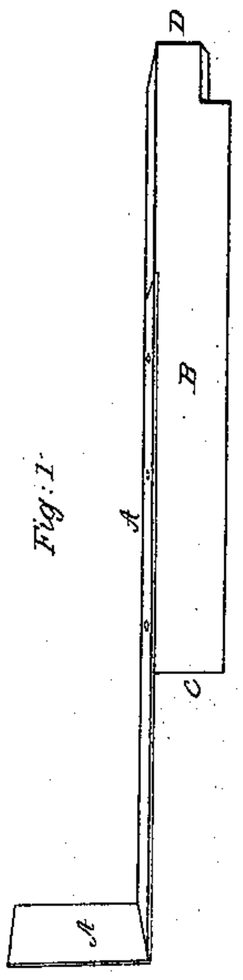


Fig. 2

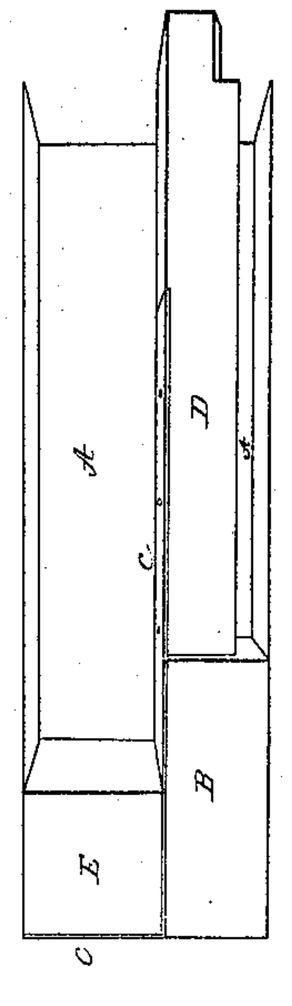


Fig. 3

Fig. 4

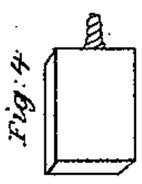
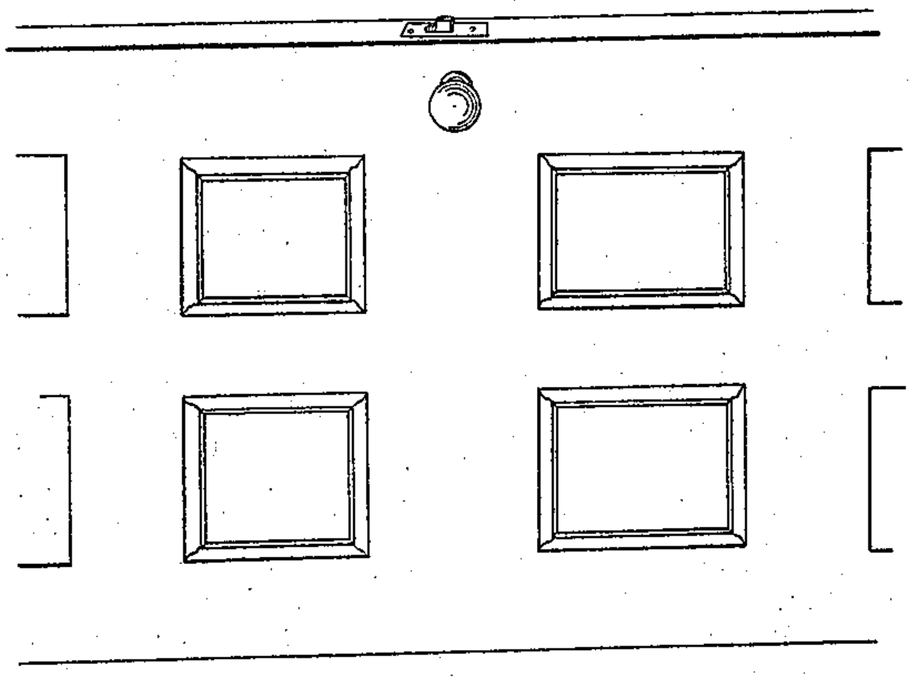


Fig. 5

Fig. 6



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

DAVID N. ROPES, OF PORTLAND, MAINE.

MORTISE-LATCH FOR FASTENING DOORS.

Specification of Letters Patent No. 414, dated September 28, 1837.

To all whom it may concern:

Be it known that I, DAVID N. ROPES, of Portland, in the county of Cumberland and State of Maine, have invented a new and useful Improvement in Door-Latches, of which I do hereby declare the following to be a full and exact description.

The nature of my invention consists in so connecting a spring and bolt or latch, as to make a simple, durable and cheap fastening for doors.

To enable others skilled in the art to make and use my invention I proceed to describe its construction and application.

For the construction of a latch for a door of the usual dimensions, I take a piece of sheet steel about 6 inches long $\frac{5}{8}$ of an inch wide and 1-32 of an inch thick and having turned up one end of it one inch at a right angle, I fasten the other end firmly by riveting or otherwise, on to a bar of iron or other metal, about $4\frac{1}{2}$ inches long, $\frac{1}{2}$ an inch thick and the same width as the piece of steel above mentioned (see Figure 1). A, A, the piece of sheet steel fastened permanently on to the top of the bar B, in such a manner as to leave a space of about 2 inches between the end C, of the bar and the angle in the steel. This part of the steel; viz., the part between the end of the bar and the angle, must have the best of spring temper, the under side of the end D, of the bar, should be beveled for about $\frac{1}{2}$ an inch as in the common spring latch in order that it may slip more readily into the catch, when the door is shut. This completes the latch.

To apply it to the door, I mortise into the edge of it a hole about $\frac{3}{4}$ of an inch wide, 2 inches high, and deep enough to allow the end of the latch to project about $\frac{1}{2}$ an inch beyond the edge of the door, I then take a block of well seasoned wood about 2 inches long, 1 inch high, and wide enough to fit tightly into the mortise, and drive it in endwise as far back as the mortise will allow and so that it shall rest on the bottom of the mortise, (or if preferred a piece corresponding to this may be left in the door, when the mortise is cut.) I then insert the latch, placing that part which lies between the end C of the bar (Fig. 1) and the angle in the spring; upon the top of the block above mentioned; and the part which is turned up one inch, against the back of the mortise; then, having prepared a wedge of well seasoned wood, 1 inch long and high and wide enough to fill the back part of the mortise above the block, after the spring is inserted; I drive it in over the spring, as far back as the mortise will allow and thus secure it to the door. This wedge should be secured in its place by gluing or by a wire passing through its center and the door, see Fig. 2, which represents a section of a door with the latch attached. A, A, the mortise. B, the block driven into the mortise and on which rests the spring C, C, which is riveted on to the bar D. E, the wedge driven over a part, and against the back of the spring C, C, forcing it down upon the block B, and against the back of the mortise, and thus securing it in its place. I then screw on to the edge of the door an escutcheon of a size sufficient to cover the mortise and having an aperature large enough to allow the latch to rise and fall freely.

For the purpose of raising this latch, I bore a hole of about $\frac{1}{2}$ inch diameter through the door about 3 inches from its edge and so that the top of it shall be on a level with the bottom of the latch. Having guarded this hole by suitable escutcheons screwed on to each side of the door, I pass through it a round bolt of iron, as large as the escutcheons will admit and allow to turn freely, and long enough to project about $\frac{1}{2}$ an inch beyond each side of the door, onto each end of this bar I affix a knob or other convenient handle for turning it; then, having previously flattened the top end front of about 1 inch of the center of the bolt, as in Fig. 3; and cut at A, a female screw in the center of that part of it which will lie nearest to, and fronting the edge of the door; I screw into it a flat piece of iron about $\frac{1}{2}$ an inch long $\frac{1}{2}$ an inch wide and from $\frac{1}{4}$ to $\frac{1}{2}$ an inch thick (see Fig. 4) so that it may project from the bolt immediately under the latch and act as a lever for raising it when the bolt is turned. See Fig. 5, A, A, is the bar which passes through the door having a knob B, B attached to each of its ends, C the flat piece of iron or lever for raising the latch screwed into the bar A, A, in such a manner that it may come immediately under the latch. Fig. 6

represents a door complete with one of the above latches attached.

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

The method of permanently connecting, by riveting or otherwise, after the manner herein described; a spring and bar or latch of any suitable size to be used as a fastening for doors.

DAVID N. ROPES.

Witnesses:
Jos. Ropes,
Geo. Ropes.