

J. R. PAYSON.
Latch.

No. 219,977.

Patented Sept. 23, 1879.

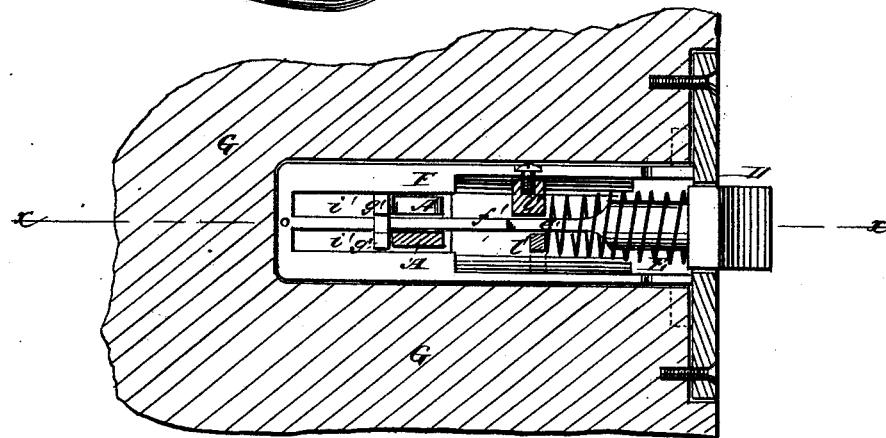
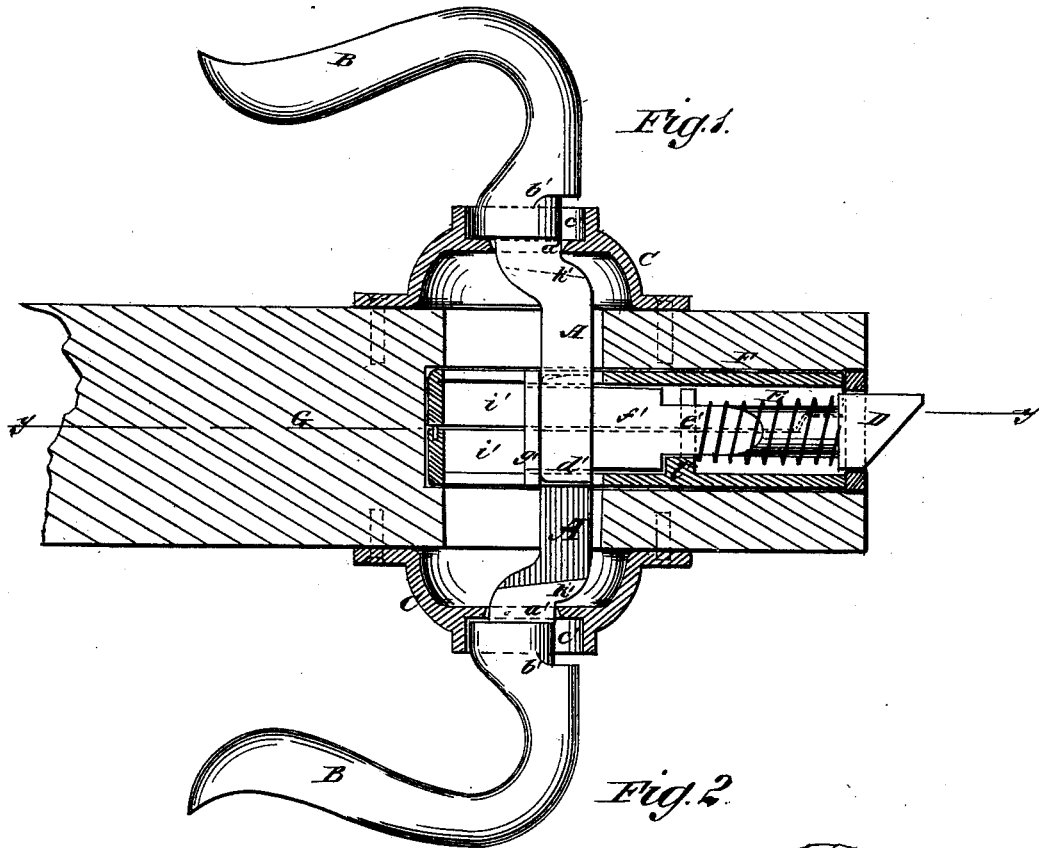


Fig. 3

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH R. PAYSON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN LATCHES.

Specification forming part of Letters Patent No. **219,977**, dated September 23, 1879; application filed May 3, 1879.

To all whom it may concern:

Be it known that I, JOSEPH ROWE PAYSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Door Handle and Latch, of which the following is a specification.

Figure 1 is a sectional plan on line *x x*, Fig. 2. Fig. 2 is a transverse section on line *y y*, Fig. 1. Fig. 3 is a reverse elevation of the rose.

Similar letters of reference indicate corresponding parts.

The invention consists in a lever having a curved shoulder, in combination with a rose having a square orifice, and in combining with the latch-bolt a latch-lever having a curved shoulder, pivoted in rose, and provided with a handle, as hereinafter described.

A A represent twin latch-levers, that are flat and thin enough to work past each other in the latch-case, and are set upon the handles B B out of center sufficiently to pass each other when pivoted in the roses, and inserted in the latch-case from opposite sides of the door, by which means either handle can be used upon the right or left hand side of the door to open the same.

a' a' are the fulcrums of the levers where they enter the roses C C, at which point the levers are made square. *k' k'* are curved shoulders upon the levers, that give them a secure hold in the roses when the latter are fastened to the door.

B B are handles formed upon the levers A A, in such manner that each handle and lever can be cast complete in one piece. *b' b'* are notches in the bases of the handles, which allow for the necessary lateral movement of the same in operating the latch.

C C are the twin roses, which are fastened with screws exactly opposite to each other on the door G, and are provided with square orifices C' C', through which levers A A can be passed in an oblique direction before being inserted in the latch-levers, where they engage with the latch-bolt against *g' g'*.

D is a latch-bolt, with spring-shank *e'* formed thereon, and *f'* is a thin flat extension thereof, which works between the levers. *g' g'* are rectangular projections formed upon the end

of the bolt-extension *f'*, that furnish bearings for the levers.

E is a spiral spring coiled around shank *e'* of the bolt. F is a cylindrical latch-case. *i' i'* are parallel slots formed in the rear end of the case F, and extending through the same, for the levers to work in. The ends of the projections *g' g'* also extend into these slots, and slide in them, and thus hold the rear end of the bolt in its proper position.

l' l' are shoulders formed in the case F for the end of the spiral spring to rest against.

The cylindrical case F is inserted in the edge of the door G by boring a round hole of suitable size in the same. Another hole is bored through the door, near the rear end of the case F, to receive the levers and give them room to work.

The roses are fastened to the door with long screws, that have a hold in the solid wood on either side of the latch-case.

Arranged as shown, it is evident that a slight oblique pull upon the end of either of the handles will throw back the bolt and open the door, for the handle and lever moving laterally in the rose C at fulcrum *a'*, as upon a pivot, and the end of the lever pressing against the shoulder *g'*, will force the bolt back into the case F.

So easily does the latch work that the door can be opened from either side with the finger, or even with the elbow or foot, if the hands be full.

On releasing the handle the bolt will be thrown forward, and held in its primary position by the action of the spiral spring.

Whenever one of the handles is moved the opposite one remains stationary, and when the bolt is forced back by the closing of the door both handles remain unmoved.

This arrangement also gives a strong and uniform leverage upon the latch-bolt, with but little, if any, lost motion, and it allows of handles with levers being applied to doors of different thicknesses without change.

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

1. The latch-lever A, having curved shoulders *k'*; in combination with rose C, having

square orifice, the former being self-fastening in the latter, as and for the purpose set forth.

2. In combination with a latch-bolt, the forwardly-operating lever A, with curved shoulder *k'*, fulcrum *a'*, and handle B, said lever being pivoted in rose C, to give a to-and-fro

movement to handle and lever in operating latch-bolt.

JOSEPH ROWE PAYSON.

Witnesses:

EDWARD PAYSON,
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