J. C. Palmer.

Latch.

No. 4,229. Patented Oct. 11, 1845.

Fig. 3

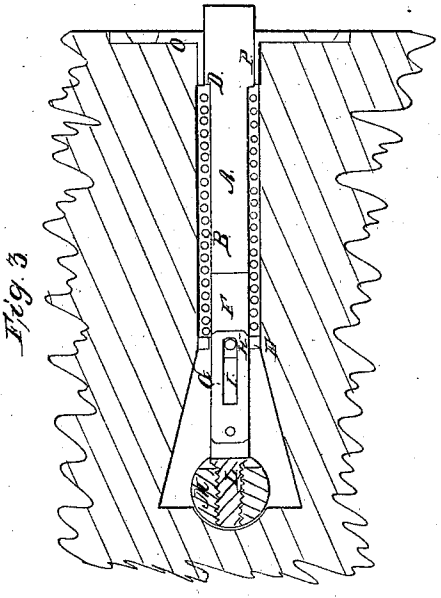


Fig 2

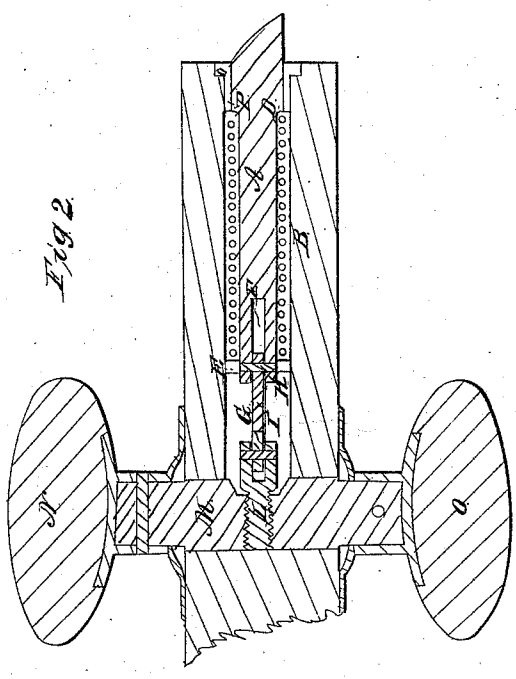
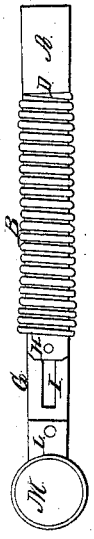


Fig. 1.



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

UNITED STATES PATENT OFFICE.

JNO. C. PALMER, OF EAST HADDAM, CONNECTICUT.

DOOR-FASTENING.

Specification of Letters Patent No. 4,229, dated October 11, 1845.

To all whom it may concern:

Be it known that I, JOHN C. PALMER, of East Haddam, in the State of Connecticut, have invented a new and useful Improvement in Spring Latch-Bolts for Doors; and I do hereby declare that the nature of my invention and the manner in which it operates are fully set forth and represented in the following description and accompanying drawings, letters, figures, and references marked thereon.

Figure 1, of the above mentioned drawings denote an elevation of my improved latch bolt as it appears when removed from a door and without the knobs, but connected to the shank of the knobs. Fig. 2 is a horizontal and central section of it as applied to the door and knobs, and Fig. 3, is a vertical and central section of it, under similar circumstances.

In the said drawings, A, represents the latch bolt whose shank passes through a wound helical spring B. The said spring at one end rests in contact with a shoulder D of the bolt, and at its other end it abuts against a washer or shoulder E let into or formed within the door as seen in the drawings. The rear end of the spring bolt is split open for some distance or has an oblong passage F made in it as denoted by Figs. 2 and 3. A flat link G whose thickness corresponds nearly with the width of the said passage has one end inserted in the rear part of the passage, and is secured therein or to the rear end of the bolt, by a pin or rivet H which passes through the end of the bolt. The said link or connecting bar G has a long slot I formed through it for some distance and of a width equal to or a very little greater than the diameter of the pin or rivet H, and the rear end of the said bar or link is jointed to the head of a screw L, in such manner as to admit of a vertical movement of the link, when the shank of the knobs is turned in the door. The screw above mentioned is to be screwed into the shank M of the knobs N, O, the said shank having a proper screw hole cut through its central part in order to receive the screw, and permit the head thereof or part to which the connecting bar is jointed to project beyond it far enough to receive the end of the said link or bar.

The front end of the spring bolt is to be made square or in any other proper shape, and supported, when placed in the door by a suitable socket or bearing P applied to a plate Q, which is screwed to the edge of the door as seen in the drawings.

The principal advantage of having the screw L and connecting link G applied to the bolt in the manner set forth, is to be found in the facility with which the same admits of the application of the spring bolt and knobs to the door, as on the knobs and their shank being fixed in place, it only becomes necessary to insert the bolt, screw and link in the cavity made in the door to receive them, and then bring the screw in contact with the shank of the knobs or screw hole thereof, and, when this is all done, turn the bolt upon its axis, until the screw enters the shank a sufficient distance. On turning the shanks of the knobs, the bolt will be retracted.

When the door is closed, the bolt will readily recede without affecting or turning the knobs or their shank, as whenever the bolt is thus retracted the slot of the connecting link G will allow the pin or rivet of the rear end of the bolt to pass rearward through the links, while, at the same time the opening of the rear end of the bolt receives the link and moves over it.

Another and important advantage derived from the peculiar manner in which the parts are arranged and constructed, is the cheapness with which they may be made as I entirely dispense with projecting arms on the bolt such as are commonly used, and also with the common tumbler through which the shank of the knobs is passed. By dispensing with the tumbler, I obviate the difficulty which so often arises from wear of the square shank in the eye of the tumbler, whereby the tumbler either becomes very loose upon the shank or has its hole or eye worn to such an extent as to allow the shank of the knobs to turn entirely around therein.

I am fully aware that there is nothing new in the employment of a lever and a connecting bar, for the purpose of withdrawing or retracting, or otherwise giving motion to an article of mechanism, and therefore I do not lay claim to such, but

That which I do claim is—

The combination of a screw pin L with the connecting bar G in such manner as to be applicable to the shank of the knobs or detachable therefrom, as herein before described.

In testimony whereof, I have hereto set my signature, this tenth day of September, A. D. 1845.

JOHN CLEAVELAND PALMER.

Witnesses:

R. R. PALMER,

A. C. LIPPITT.