No. 771,542. PATENTED OCT. 4, 1904.

J. R. FLETCHER.

LATCH.

APPLICATION FILED AUG. 9, 1904.

NO MODEL.

Fig. 1.

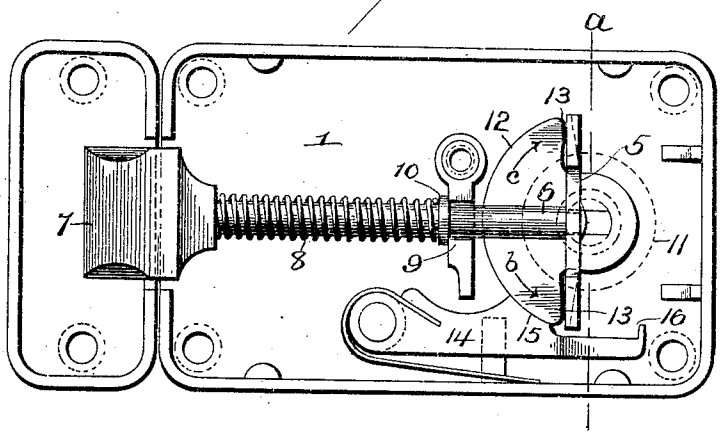


Fig. 2.

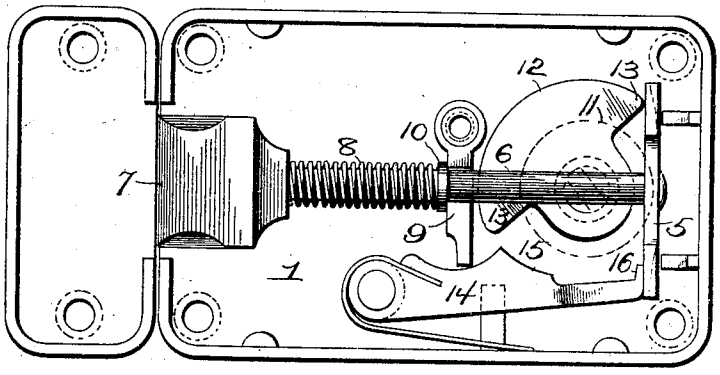
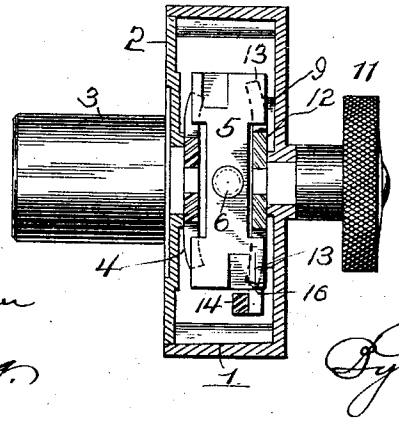


Fig. 3.



WITNESSES

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No. 771,542. Patented October 4, 1904.

UNITED STATES PATENT OFFICE.

JAMES ROBERT FLETCHER, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

LATCH.

SPECIFICATION forming part of Letters Patent No. 771,542, dated October 4, 1904.

Application filed August 9, 1904. Serial No. 220,117. (No model.)

To all whom it may concern:

Be it known that I, JAMES ROBERT FLETCHER, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Rim-Latches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in rim-latches, the object being to so construct the latch-bolt that the latter can by the manipulation of a single knob be either withdrawn temporarily, so as to unlock the door, or can be retained in its retracted position, so as to permit the door to remain unlocked.

With this end in view my invention consists in a latch-bolt normally pressed outward by a spring and provided with a shank carrying a transverse bar and a knob having a lever which when turned in one direction moves the bolt to its retracted position and when turned in the other direction operates to hold the latch-bolt retracted.

My invention further consists in the parts and combination of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation showing the back face-plate of the latch-casing removed and the latch-bolt in position engaging the keeper. Fig. 2 is a similar view showing the knob-lever turned in a position to retract the latch-bolt and the latter locked in its retracted position, and Fig. 3 is a view in transverse section on the line *a a* of Fig. 1.

1 represents the casing, provided with the removable back face-plate 2. This face-plate 2 carries a cylinder 3, which latter may carry tumbler mechanism or may be simply provided with guards to engage wards on the key.

Secured against the inner face of the back face-plate 2 and actuated by the key is the lever 4, which latter engages the transverse bar 5, carried on the rear end of the spindle 6 of the latch-bolt 7, whereby the latter can be manipulated from the outside of the door by a key of the proper construction.

The latch-bolt is provided with the rearwardly-projecting spindle 6, which latter is encircled by a spring 8, which normally tends to hold the latch-bolt 7 in its outer position or in a position to engage its keeper. The shank is mounted and guided midway its length in the abutment 9, against which the washer 10, supporting one end of the spring 8, rests and bears.

Secured to the rear end of the latch-bolt spindle 6 is the transverse bar 5, which latter, as before explained, is engaged by the lever 4, actuated by the key.

Pivotally mounted in the front face of the casing is the knob 11, provided at its inner end within the casing with the double-ended lever 12. The ends 13 of this lever and also the ends of the lever actuated by the key are turned inwardly so as to engage the front face of the transverse bar 5, and when the bolt is in the position shown in Fig. 1 these four ends are in contact with the front face of the transverse bar 5.

From the operation thus far described it will be apparent that by turning the knob in either direction the latch-bolt will be retracted.

Pivotally mounted within the casing is the spring-pressed dog. This dog has a rounded face 15, which normally rests in contact with the rounded front edge of lever 11 and is provided at its rear end with an inwardly-projecting toe 16, which latter is beveled slightly on its front face. When the latch is in its normal position, the rounded edge of the lever engages the curved surface of the dog and holds the toe of the dog out of the path of the transverse bar. Hence when the lever is turned by the knob in the direction of the arrow *b* the latch will be temporarily withdrawn and will spring back to its normal position immediately upon release of the knob. If, however, the knob be turned in the opposite direction, so as to move the lever 11 in the direction of the arrow *c*, the curved edge of said lever moves away from the curved face of the dog, thus permitting the toe of the dog to move into the path of the transverse bar 5 and offers a slight resistance to the further

movement of the latch-bolt. If, however, the movement be continued, the inclined surface at the back of the transverse bar, acting in conjunction with the inclined face of the toe, forces the latter out of the path of the bar until the latter has passed the toe, when the toe then springs forward and bars the outward movement of the transverse bar, thus retaining the latch-bolt in its retracted position. To release the bolt thus locked in its retracted position by the toe of the dog, it is simply necessary to reverse the movement of the lever on the knob, when the curved surface of the lever coming in contact with the dog moves the latter out of engagement with the transverse bar, thus permitting spring 8 to throw the bolt to its normal position.

It is evident that changes in the construction and relative arrangement of the several parts might be made without avoiding my invention, and hence I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described; but,

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

1. The combination with a latch-bolt, a spindle on the bolt and a transverse bar on the end of the spindle, of a double lever engaging the transverse bar and a spring-actuated dog for engaging the transverse bar when the double lever is moved in one direction.

2. The combination with a latch-bolt and a transverse bar at the end thereof, of a knob, a lever on the knob for engaging the transverse bar, and a spring-actuated dog normally held out of contact with the transverse bar by said lever and adapted to move into the path of said transverse bar when the knob is turned in one direction and to be moved out of the path of said transverse bar by a reversal in the direction of the movement of the knob.

3. The combination with a latch-bolt, a transverse bar thereon, a knob and a lever carried by the knob and engaging the transverse bar, of a spring-actuated dog having a toe normally held out of the path of the transverse bar by said lever and adapted to move into the path of said transverse bar when the lever is turned in one direction, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES ROBERT FLETCHER.

Witnesses:
W. H. TAYLOR,
E. B. HINDLEY.