E. W. BRETTELL.

Latches.

No. 210,291. Patented Nov. 26, 1878.

Fig. 1.

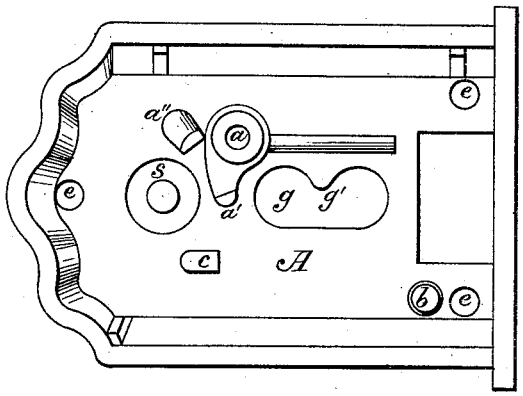


Fig. 2.

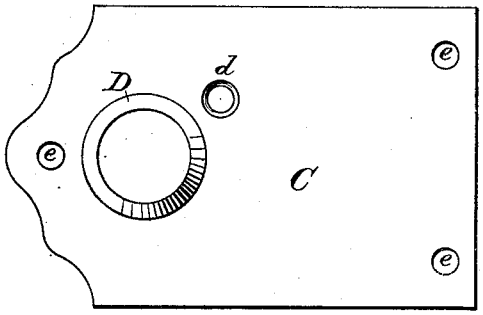


Fig. 3.

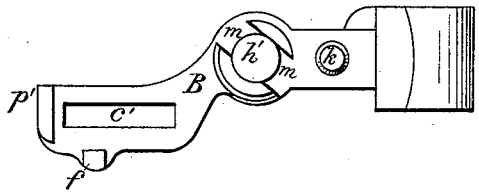
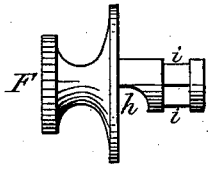


Fig. 4.



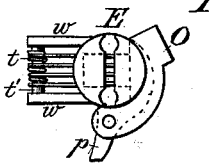


Fig. 5.

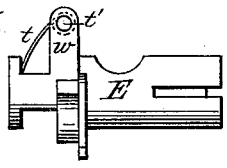


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Fig. 6.

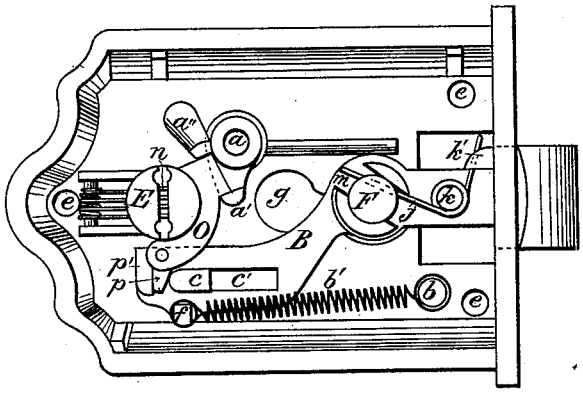
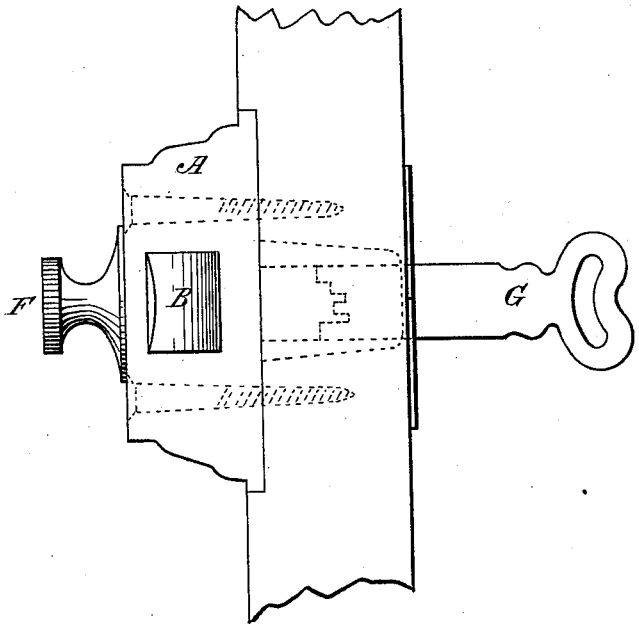


Fig. 7.



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UNITED STATES PATENT OFFICE.

EDWARD W. BRETTELL, OF NEWARK, NEW JERSEY, ASSIGNOR TO THOMAS W. LANGSTROTH, OF SAME PLACE.

IMPROVEMENT IN LATCHES.

Specification forming part of Letters Patent No. **210,291**, dated November 26, 1878; application filed August 31, 1878.

To all whom it may concern:

Be it known that I, EDWARD W. BRETTELL, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of door-locks commonly called "night-latches," which are placed upon the inner side of a door, and operated upon that side by means of a rotating and sliding knob attached to the bolt, but which are acted upon from the outer side of the door by means of a key inserted into a rotating tumbler-case, the revolution of which operates the bolt of the lock; and the present invention consists in certain details of construction and the arrangement of parts by which the cost of manufacture is reduced to a minimum, while the efficiency and durability of the lock remain undiminished.

In the drawing, Figure 1 represents a plan of the inner side of the outer case of the lock, showing the orifices by which it is pierced, together with the studs and projections cast with it for securing the various parts of the operative mechanism in place. Fig. 2 shows the plate which covers the inner side of the lock, and carries the projecting tube which incases the rotating key-tumbler case. Fig. 3 is a plan of the bolt, showing its various projections and orifices. Fig. 4 is a side view of the knob by means of which the bolt is moved from the inner side of the door. Fig. 5 shows a plan and side view of the rotating key-tumbler case and its attached mechanism. Fig. 6 exhibits the lock with the cover removed, showing the relative position of the several operative parts when the bolt is in the locked position; and Fig. 7 is an end view of the lock in position upon a door, the sleeve projecting from the cover which guides and protects the key-tumbler case being shown in dotted lines.

A represents the outer case, cast in one piece, and of such form as to make a box open at one side, within which are located the several studs, projections, and bearings employed for the purpose of retaining the bolt B and its operative mechanism in place. The open side of the case is closed by the cover C, which rests upon the top of the studs *a*, *b*, and *c*, within the edge of the case A, so that the outer surface of the cover shall be flush with the edges of the case when in place, where it is secured by a screw passing through the orifice *d* in the cover, and entering a screw-threaded hole in the stud *a*. This cover is also provided with the sleeve-like projection D, which passes through the door, and serves as a guide and protection to the key-tumbler case E. The holes *e e* in the case and cover allow the screws to pass through the lock which secure it in place upon the door.

The bolt B is guided in its movements at one end by the mortise in the side of the case through which it passes, and at the other by the stud *c*, passing through the elongated slot *c'* in the bolt.

A projection, *f*, receives one end of the coiled springs *b'*, the opposite end of which is attached to the stud *b*, thus tending to draw the bolt outward continually. This movement is, however, regulated by the sliding knob F, the spindle of which passes through the heart-shaped opening *g* in the case, and is provided with a recess, *h*, which allows the knob, when turned into such a position as will bring the recess *h* opposite the inward projection *g'* of the opening *g*, to slide freely from end to end of the opening, and as the inner end of the spindle passes through the hole *h'* in the bolt the latter is carried forward and back by its movement. It will be seen, however, that if the knob is turned so as to prevent the projection *g'* from passing through the recess *h* of the spindle, the knob, together with the bolt, will be held stationary at whichever end of the opening *g* it may be at the time, thus allowing the bolt to be moved so as to lock the door, and then, by turning the knob, securing the bolt firmly in that position, so that it cannot be moved until the knob is again turned so as to allow it to pass the projection *g'*; or the knob may be rotated when the bolt is with-