(No Model.) 2 Sheets—Sheet 1.

E. N. BEEBOUT.

LATCH AND LOCK COMBINED.

No. 534,242. Patented Feb. 12, 1895.

Fig. 1.

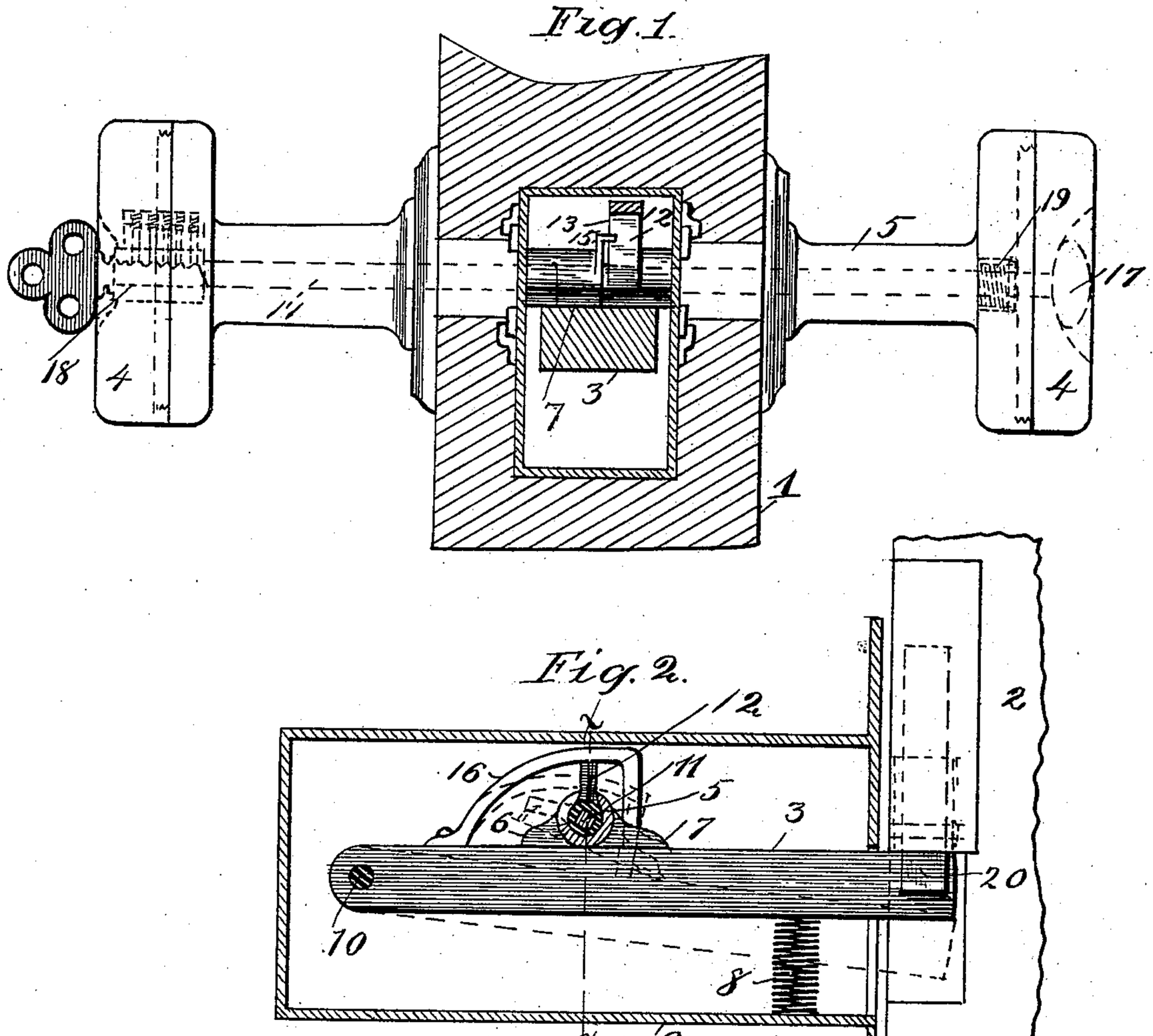

Fig. 2.

Fig. 5.

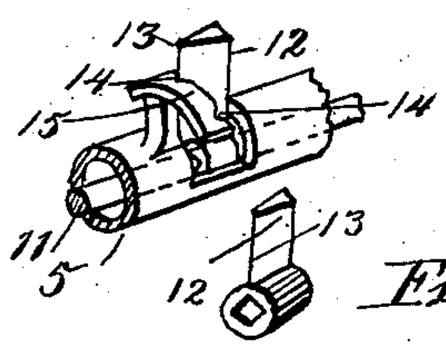

Fig. 6a

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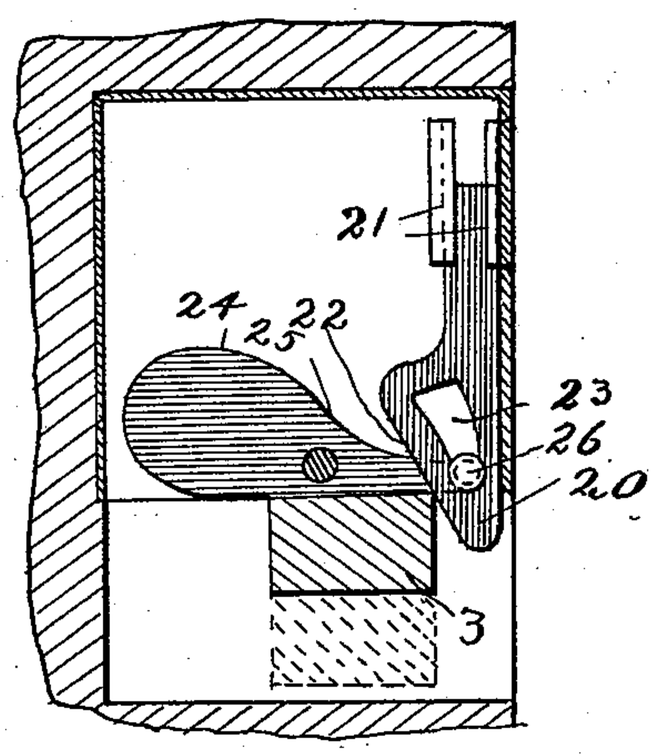
Fig. 3



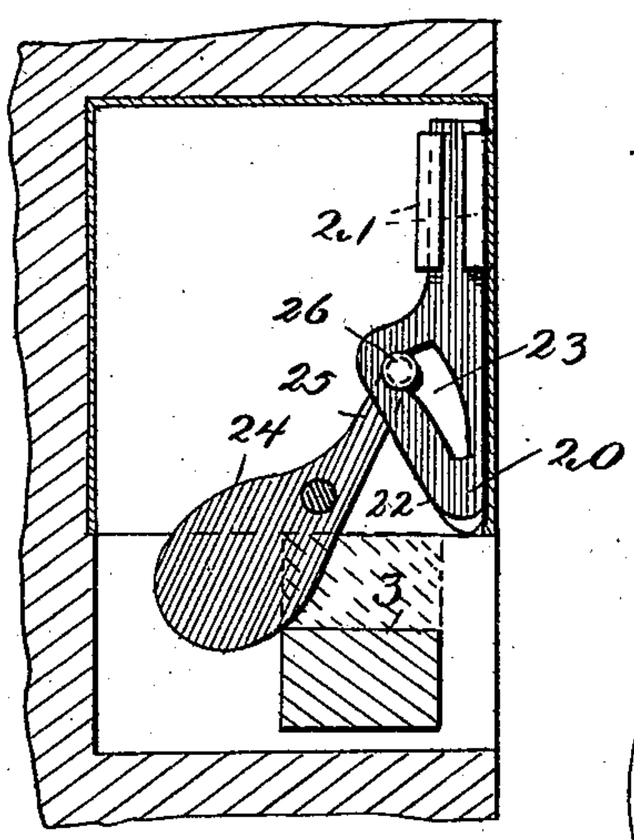


Fig 4

Fig 6

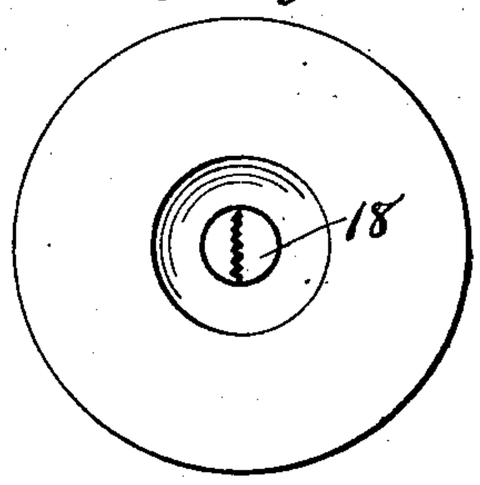
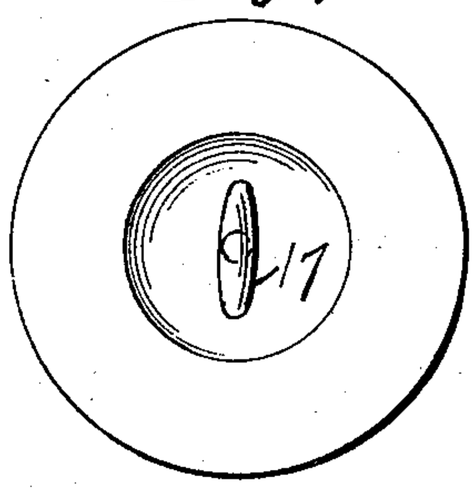


Fig 7



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UNITED STATES PATENT OFFICE.

EDWARD N. BEEBOUT, OF CLEVELAND, OHIO.

LATCH AND LOCK COMBINED.

SPECIFICATION forming part of Letters Patent No. 534,242, dated February 12, 1895.

Application filed November 21, 1894. Serial No. 529,533. (No model.)

To all whom it may concern:

Be it known that I, EDWARD N. BEEBOUT, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in a Combined Door Lock and Latch, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in combined door locks and latches, and is designed to be self-locking and to make rigid connection with the adjacent parts of the jamb in order to prevent the rattling noise consequent upon the loose fitting of most doors on their casings, and also to insure a perfect engagement of the latch in a poorly fitted or swollen door.

My invention consists in two distinct portions, the latch in the door and the movable keeper in the jamb, with the locking device and details of construction and combination and arrangement of parts, as hereinafter described, shown in the accompanying drawings and more specifically pointed out in the claims.

In the drawings Figure 1 is a transverse section of door on line *x*—*x* showing latching device and operating knobs. Fig. 2 shows transverse section of latching sleeve, with longitudinal view of latch and adjacent parts. Fig. 3 is a detail of keeper showing latch in engagement therewith. Fig. 4 is a view of keeper showing it elevated above the latch. Fig. 5 is a detail of locking edges. Figs. 6 and 7 are views of the two knobs.

In the figures 1 is the door; 2, the casing; 3, the latch; 4, the knobs, upon the sleeve 5, to which are rigidly secured the projecting lugs 6 and 7 by which the latch is operated.

8 is a spring which restores the latch to the longitudinal position.

9 is the case inclosing the latch; 10, the pin upon which the latch pivots.

11 is a locking stem which passes through the latching sleeve. This stem is provided with the projecting lug 12 provided with a vertical edge 13 which engages the notches 14, 14 on the projecting plate 15 secured to the sleeve 5.

16 is a loop of metal secured to the latch, and so placed that where the lug 12 is turned upward it will engage the lower side of the loop, as in Fig. 2, and prevent the latch from falling; but when turned as shown in dotted lines the latch can fall readily when either knob is turned. The notch at either position will retain the lug 12 until the thumb piece or key is turned. The locking edge 13 can be removed from either notch 14 by the thumb piece 17 on the inner knob and the Yale or other suitable form of lock 18 on the outer knob, while it is removably held in either of these notches by means of the spring 19. By these means the lock is efficiently held shut when desired and cannot be opened from the outside without a key, while from within it is easily controlled.

In order to provide a keeper with which the latch can always tightly engage, under the varying circumstances of climate or heating, which alternately swells and shrinks the doors and jambs, the construction shown in Figs. 3 and 4 is adapted where 20 is the keeper, vertically movable in guiding lugs 21, and provided with wedge shaped extremity 22 and slotted opening 23. This wedge shaped keeper is arranged to drop down behind the latch and prevent removal, while the wedge shaped edge will descend until perfect engagement is made without regard to the exact position of the latch.

24 is a cam shaped tumbler by means of which the keeper is raised to prepare for the entrance of the latch. Its operation is shown distinctly in Figs. 3 and 4.

Fig. 4 shows the position of the tumbler and keeper when the door is opened, where the latch is shown as having entered the jamb and is about to be removed, and in dotted lines its position when entering the jamb. As it enters horizontally it lifts up also the tumbler, which is provided with the extension 25 and pin 26 moving in the slot 23. This pin holds the wedge on the keeper away from the latch until the tumbler is lifted by the latch, when the parts take the position shown in Fig. 3, while the wedge cuts off all means of withdrawal of the latch, until it is lowered to dotted position, Figs. 2 and 3, when it is ready for removal again.

It is clear that when the latch has been

lowered by turning the knobs, the tumbler will fall, and the extension carrying the pin will rise and again elevate the wedge shaped keeper, since the free extremity of the tumbler is somewhat heavier than the extended arm and wedge. Again, the weight of the wedge being upon the extended arm when the tumbler is down, it assists the latch to raise the tumbler to the position shown in Fig 3.

It will further be seen that the latch, as shown in Fig. 3 cannot be picked from outside, for the reason that when the wedge is down behind the latch as in Fig. 3, the pin falls to the bottom of the slot and the wedge could not be lifted; or if the door should shrink, allowing the wedge to descend farther than shown, the point extends far beyond the slot to prevent its being withdrawn above the latch.

Among the advantages of this device will be found the security of the fastening for any door, no matter how much sprung or warped out of shape or swollen so that it cannot entirely shut, as is the case with the refrigerator doors, or outside doors exposed to the weather, and by the use of rubber listing an air tight fitting can be obtained.

The key hole in a recess in the knob is especially convenient at night, since the knob is easily found, and the key will be readily directed to the recess in the knob.

Slight changes might be made in the construction without departing from the spirit of the invention, as a thumb latch in place of knobs, or other well known method of lifting the latch.

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

1. In a combined door lock and latch, the combination with a lifting latch of knobs and sleeve provided with extended lugs adapted to depress said latch, a spring underneath said latch, a loop upon said latch and a central stem within said sleeve, provided with an extended lug adapted to engage the under side of said loop and prevent the latch from moving, or the knobs from turning; a plate segment secured to said sleeve provided with notches adapted to engage the said lug upon the sleeve and retain it either in or out of engagement with said loop, a retaining spring upon the stem, and a locking device in the outer knob, and a thumb catch in the inner knob, substantially as described.

2. In a door latch the combination with a pivoted horizontally moving latch bar of a wedge shaped keeper moving vertically in guides in the jamb, and a pivoted tumbler adapted to be lifted by said latch when entering the jamb, and lowered by its own weight when the latch is lowered, whereby the keeper is raised above the path of the latch when the latch is opened, and lowered behind the latch when the latch has entered the jamb substantially as described.

3. In a door latch the combination with a pivoted horizontally latching latch-bar of the pivoted tumbler 24 provided with extension 25 and pin 26, the wedge shaped keeper 20 moving in guides 21 and provided with slotted opening 23, and means for locking the latch bar to prevent removal from the jamb substantially as described.

4. In a combined door lock and latch the combination with a lifting latch of knobs and sleeve provided with extended lugs adapted to depress said latch, a loop upon said latch and a central stem within said sleeve provided with an extended lug adapted to engage the under side of said loop, and prevent the latch from moving or the knobs from turning, and a locking device in the outer knob connected with said stem, a depression in said knob and key-hole connecting with said locking device in said depression, substantially as, and for the purpose described.

EDWARD N. BEEBOUT.

Witnesses:
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