

A. DRURY.
LOCK AND LATCH.
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1,059,932.

Patented Apr. 22, 1913.

Fig. 1.

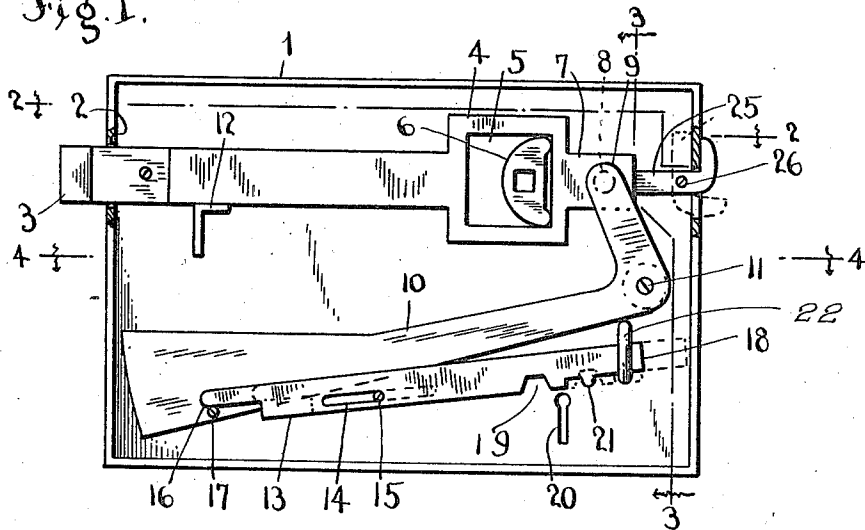


Fig. 2.

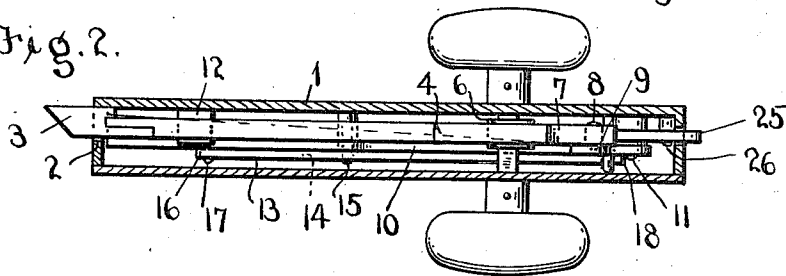


Fig. 3.

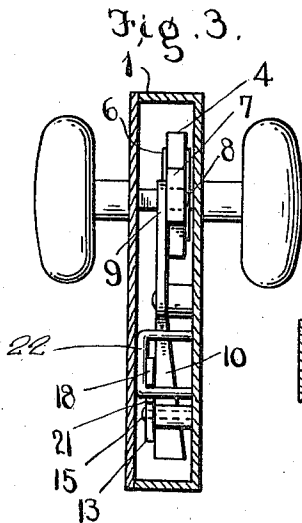
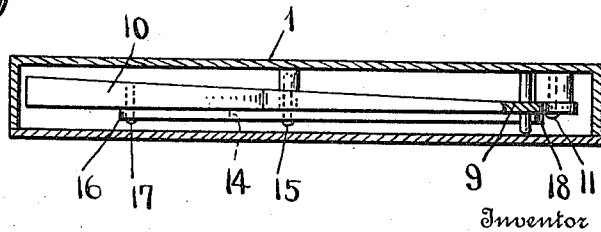


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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LOCK AND LATCH.

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To all whom it may concern:

Be it known that I, ARCHIE DRURY, a citizen of the United States, residing at Elgin, in the county of Chautauqua and State of Kansas, have invented certain new and useful Improvements in Locks and Latches; and I do 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.

This invention relates to locks and latches, and more especially to those devices wherein these elements are combined; and the object of the same is to produce a combined lock and latch which has no springs in it, and yet wherein the latch can be unlatched by turning the knob in either direction, can be locked with a key and unlocked by the same means, and has a night latch fastener if desired. This object is carried out by constructing the device in the manner herein after more fully described and claimed and as shown in the drawings wherein—

Figure 1 is an elevation of this lock with the near face plate removed, showing the latch bolt as projected and the locking mechanism and night latch in action. Figs. 2, 3 and 4 are sectional views on the lines 2—2, 3—3 and 4—4 of Fig. 1.

In the drawings the numeral 1 designates the casing whose details need not be described excepting that at one end it is pierced with an opening 2 through which protrudes the beveled end of the latch bolt 3, the body of the latter within the casing having an enlargement 4 provided with an opening 5 within which moves a double-cam 6 having a square opening for the passage of the knob-spindle (not shown) so that the cam 6 can be turned in either direction within the opening 5 to retract the latch bolt 3 and disengage its projecting end from the keeper, in a manner well understood. Back of the enlargement 4, the body of the bolt is again reduced as at 7 to about the size of the front end, and pivoted to this reduced portion at 8 is the L-shaped inner end 9 of a weight 10 pivotally supported at its angle at the point 11 within the casing as shown. The body of the weight normally stands oblique while the tip of the bolt is projected as seen in Fig. 1, but when the knob spindle is turned in either direction the cam 6 forces the enlargement 4 backward, and the pivotal

point 8 is caused to move around the main pivot 11 so that the heavy end of the weight 10 rises. In order to prevent its rising too high within the casing and becoming stuck alongside the latch bolt 3, a stop 12 may be provided within the casing, although this might be formed by passing through the casing one of the screws ordinarily employed for holding the same on the door. The latch bolt is stamped or cast so that it is reversible, and by removing the pivot 8 (which is preferably a small screw) the bolt can be turned with its beveled tip to either side so as to accommodate the latch to whatever position is required of it by the force of circumstances. This much of my invention is complete within itself, but by preference I add a lock as follows:

The numeral 13 designates a tumbler having a slot 14 in its body moving over a suitable guide 15 which also may be one of the screws that attach the casing to the door, and the front end 16 of this tumbler is adapted to move over a pin or projection 17 on the heavy end of the weight 10 when the latter is depressed, while the rear end 18 of the tumbler moves loosely through a suitable loop carried within the casing 1 and has a slight vertical play therein. When the tumbler is projected as seen in Fig. 1, its front end engages the projection 17 and the weight cannot be raised—therefore the latch bolt cannot be retracted by the turning of the knob; on the other hand, it will be clear that when the tumbler is retracted the front end disengages the projection 17 and the latch may be used as usual. The means for moving this tumbler may be any of those ordinarily employed in locks of this kind, but for sake of simplicity and again in order to avoid the use of any spring or springs within this device, I provide its lower edge with a recess or notch 19 adjacent the key hole 20 so that when a key (not shown) is passed into the hole and turned, its wards will engage said notch 19 and lift its inner end of the tumbler 13 and move it either inward or outward according as is necessary. In this action a projection 21 on the lower edge of the rear end 18 of the tumbler is lifted over the lower side of the loop 22 in an ordinary and well known manner. Although not illustrated herein, there might be a plurality of said tumblers 13, located side by side, in

which case the wards of the key would be shaped to correspond with the notches 19 in their lower edges, as usual. Further illustration and amplification of this detail is not considered necessary, because these features are well known. The only claim to novelty in the present case lying in the use of this detail is that it coöperates with a projection 17 on the heavy end of a weight 10, and the latter when held down by this tumbler or these tumblers locks the main bolt 3 against movement in either direction by the rotation of the knob.

At 25 is shown a night latch, pivoted at 26 through an opening in the rear end of the casing and adapted to be turned so as to prevent the rearward movement of the latch bolt 3, whether it is locked or not. This also is a well known detail, and no novelty is claimed therefor further that it is combined with the remainder of the mechanism to produce a complete whole, yet without the use of any spring or springs whatever. All parts are by preference of casting, suitably treated to prevent rust, and changes in specific details may be made without departing from the principle of my invention.

What is claimed as new is:

1. A combined springless latch and lock comprising a casing having an opening in its front edge and a transverse opening for the passage of the knob spindle, the latch bolt whose front end moves through said opening in the edge of the casing and whose body has an enlargement provided with an opening adapted to inclose the double cam of the knob spindle, an L-shaped weight pivoted at its angle within said casing with

its foot rising from said pivot and connected with said bolt, a lateral projection on said weight, a tumbler whose front end is adapted to move over this projection, a guide for the tumbler, and means for projecting and retracting said tumbler.

2. In a combined latch and lock, the combination with a casing having an opening in its front edge, a key hole, and a transverse opening for the passage of the knob spindle, a double cam adapted to be mounted on said spindle, and the latch bolt whose front end moves through said opening in the edge of the casing and whose body has an enlargement provided with an opening surrounding said cam and a reduced projection in rear of said enlargement; of an L-shaped weight pivoted at its angle within said casing with its foot rising from said pivot and connected with the reduced rear end of said bolt, a lateral projection on the heavy end of said weight, a tumbler whose front end is adapted to move over this projection and whose body is slotted, a guide over which said slot moves, and a loop loosely embracing the rear end of said tumbler, this end having a notch in its lower edge and a projection adapted to be lifted over the loop by the turning of a key inserted in said key-hole.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARCHIE DRURY.

Witnesses:

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HARVEY PARKER.