

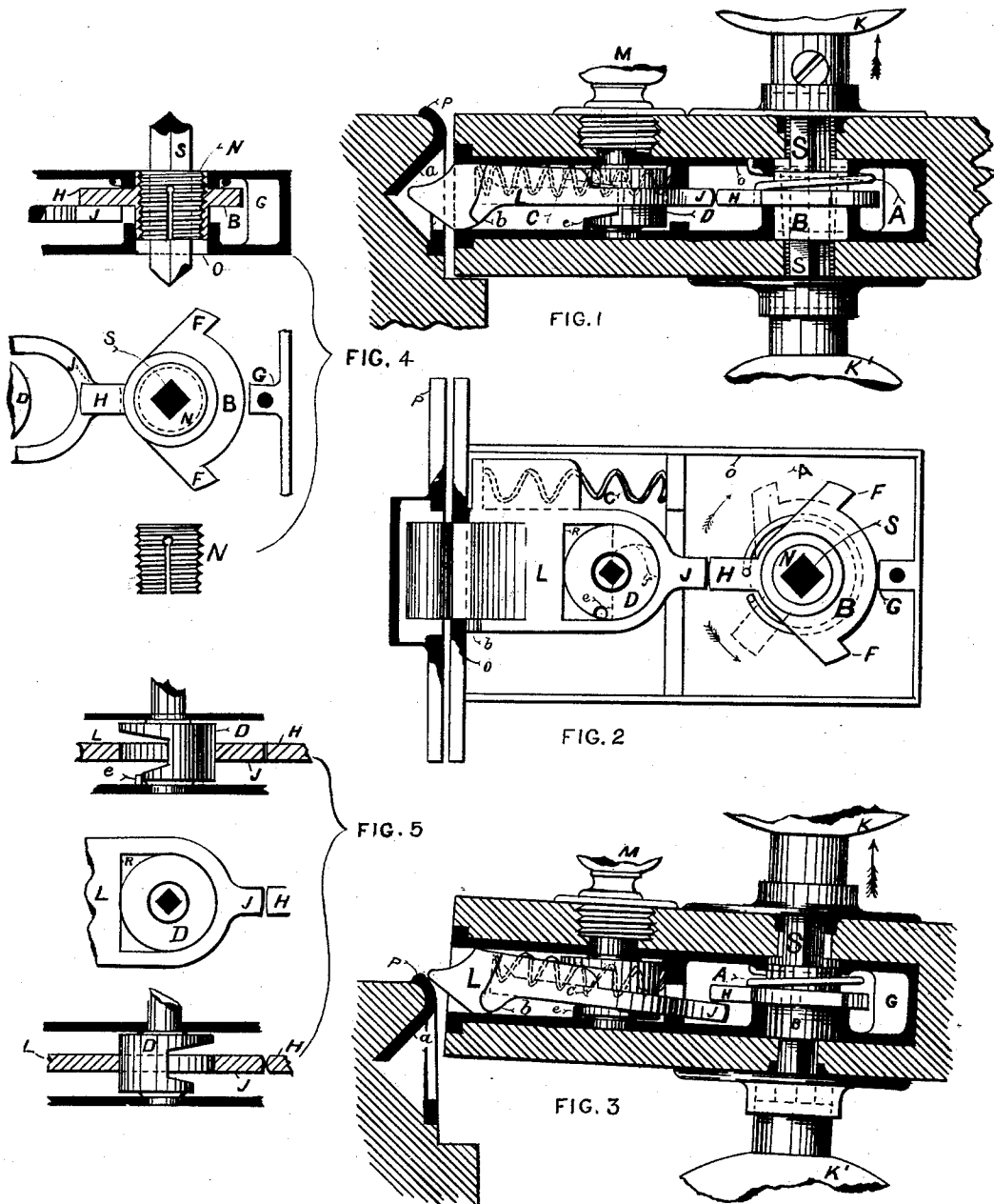
(Model.)

D. H. SHERMAN.

LATCH.

No. 340,628.

Patented Apr. 27, 1886.



WITNESSES:

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LATCH.

SPECIFICATION forming part of Letters Patent No. 340,628, dated April 27, 1886.

Application filed August 19, 1885. Serial No. 174,757. (Model.)

To all whom it may concern:

Be it known that I, DANIEL H. SHERMAN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Latches, of which the following is a specification.

My invention relates to improvements in a door-latch connected with a knob-spindle in such a way as to be operated by turning the knob in the ordinary manner or by pushing or pulling the same, and providing a stop-bolt for a night-latch. I attain these objects by the mechanism illustrated in accompanying drawings, in which—

Figure 1 is a horizontal section of the entire latch and rotary bolt; Fig. 2, a side view of the same; Fig. 3, a horizontal section showing the action and position of the latch in closing the door by pushing the door itself. Fig. 4 shows section, plan, and elevation of the device for connecting the spindle to the latch-stop; Fig. 5, a detailed view of the rotary stop for locking the latch.

Similar letters refer to similar parts throughout the several views.

The knob K K' and spindle S are of ordinary construction, and the spindle S is connected to the screw-thimble boss B within the latch-case O by a screw-thimble N, that is tapering and slotted to hold the spindle S when screwed into the said boss B by turning the knob K and spindle S until it is secure. To hold the screw-thimble boss B when turning the spindle S and screw-thimble N, a stop, G, is provided in the latch-case for the projections F on the said boss B to strike when turned in either direction, as indicated by the arrows in Fig. 2. The spindle S, when connected with the screw-thimble boss B, can be moved in the direction of its length and in a rotary direction to move the stop H on the said boss B away from the lug J of the tipping latch L. The screw-thimble boss B is shown in its normal position in Figs. 1, 2, which is maintained by the double-acting spring A, attached to the latch-casing O and to the screw-thimble boss B. The tipping latch L is provided with a double-faced strike end, the lug J, and a shoulder, b, and also with a spring-seat for the double-acting spring C to push out the said latch L until the shoulder

b is in contact with the latch-casing O. The tipping latch L is also provided with a rectangular opening, R, for the rotary bolt D, as shown in Figs. 2 and 5. The strike-plate P is unlike that of ordinary construction, in having an inner inclined surface, a, projecting into the door-casing, for the purpose of pushing back the tipping latch L in opening the door when the stop H has been removed by turning or pulling the knobs K K'. The operation of opening the door forces the said latch L against the surface a, and thence into the latch-case. In closing the door, the tipping latch L is brought against the strike-plate P and is tipped to one side, bringing the lug J under the stop H, allowing the said latch L to be forced back into the case O, as shown in Fig. 3. The position of the stop H and lug J in Fig. 4 is that when the knob K or K' has been pushed outward in opening the door. The double-acting spring C acts in two ways—longitudinally, and that of a force operating upon the opposite side of the tipping-latch L from the shoulder b, by which a lever is formed, the fulcrum being b—and the force of the double-acting spring C upon the long arm forces back the said latch L to its normal position. (Shown in Fig. 1.)

For bolting, a rotary bolt, D, is provided, that is connected with a small knob, M. The rotary bolt D is cut away to allow the tipping latch L to pass into when opening or closing the door.

To bolt the latch, the rotary bolt D is turned by the knob M, bringing the cylindrical portion in contact with the rectangular opening R of the opening in the tipping latch L. A stop-pin, e, in the latch-case O prevents the rotary bolt D from being turned too far, and the rotary bolt D is cut away, as indicated by the dotted line f, to act as a balance-weight, preventing the stop D moving out of position. The bolting is done only on one side of the door.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In combination, a reciprocating and laterally-tipping latch, L, a rotating and longitudinally-moving spindle, S, a stop, H, for locking said latch and carried on said spindle, and a spring, A, for restoring said spindle and stop to their normal position, substantially as and for the purpose set forth.

2. In combination with a latch, L, a longitudinally-moving spindle, S, provided with a stop, H, and a spring for holding said stop and spindle in their normal position, substantially as and for the purpose set forth.

3. In combination with a latch, L, a rotating spindle, S, provided with a stop, H, and a spring for holding said stop and spindle in their normal position, substantially as and for the purpose set forth.

4. The combination, substantially as described, of the reciprocating and laterally-tipping latch L, the rotating and longitudinally-moving spindle S, the boss B, secured to said spindle and carrying a stop, H, and a double-

acting spring, A, for restoring the spindle and stop to their normal position.

5. The combination, substantially as described, of a latch, L, the spindle S, the boss B, carrying the stop H, and the thimble N, attaching the boss to the spindle. 20

6. The combination, with a latch-case provided with a stop, e, of the rotary bolt D, recessed and balanced in the manner described, and the latch L, provided with an opening for 25 the rotary bolt, substantially as described.

DANIEL H. SHERMAN.

Witnesses:

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