UNITED STATES PATENT OFFICE.

ELLIS J. ROOT, OF SAN FRANCISCO, CALIFORNIA.

LATCH.

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To all whom it may concern:

Be it known that I, ELLIS J. ROOT, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Door-Latches; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of latches for doors, gates, and the like.

The object of this invention is to provide a simple, inexpensive, and efficient device of the character mentioned adapted to be operated from either side of the door and suitably arranged whereby it may be locked and rendered inoperative so far as concerns its operation from one side of the door without affecting its operativeness from the other side and also be locked in the position of entire inoperativeness out of operative engagement with the hook or catch, so that the door may be opened from either side as freely as though there was not a latch on it.

This device is designed primarily for screen-doors, for which purpose simplicity of construction, inexpensiveness of cost, and certainty of operation are prime factors in practical and commercial success. It is to fulfil these conditions that the present invention is designed.

The objects of the invention are accomplished by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a plan view, portions being broken away to more clearly illustrate it. Fig. 2 is a front elevation, the hinged latch being removed.

Referring to the accompanying drawings, 1 is a latch of approximately bell-crank form, pivoted at 2 to an escutcheon or fastening-plate 3, which is provided with screw-holes 4 or other suitable means for attachment to a door 5. Passing through the escutcheon is a spindle 6, having a knob, ring, or other suitable handle. The latch 1 is provided with a recess or pocket 7, countercored or enlarged inwardly for the reception of the outer end of the spindle. This recess is of sufficient length to permit the operation of the latch without affecting the spindle 6. The spindle 6 is provided with a button or other suitable enlargement or projection adapted to engage with the edges of the contracted forward part of the recess, whereby the withdrawal of the spindle from its recess in the latch is prevented.

Beneath the latch and between it and the escutcheon is provided a suitable spring 8, and a suitable catch, hook, or engagement 9, secured to the door jamb or frame 10, is provided adapted to engage with the hinged latch 1. Loosely pivoted on the surface of the escutcheon is provided a pawl or latch 11 adjacent to the spindle 6 and suitably arranged to be moved into engagement with the spindle, whereby its motion is prevented.

The spindle 6 is provided with two separate notches 12 and 13, the notch 12 being suitably placed to hold the spindle 6 in the position shown in Fig. 1 when the pawl 11 engages therewith, the notch 13 being suitably placed to hold the spindle at the other extremity of its motion when the pawl 11 is in engagement with it. In this position of course the latch 1 is in its open position or disengagement with the hook 9. Means are provided for returning the spindle 6 to its inward position after each operation, (shown as the spring 14 surrounding it.)

It will be observed that with the arrangement thus described the latch 1 may be operated by pressure on the leg of the bell-crank on the inside or by pulling on the spindle 6 from the outside, the spring 8 returning the latch 1 to its position for engagement when released from pressure and the spring 14 returning the spindle 6. It is evident that so long as the pawl 11 is out of engagement with notch 12 on the spindle 6 the device may be operated from either side of the door. When the pawl 11 is engaged with the spindle in notch 12, the spindle is thus locked and prevented from being moved, and so under these conditions the latch cannot be operated from the outside or handle side of the door, though owing to the depth of the recess in the latch into which the spindle enters the latch may be still freely operated from the inside. When the spindle is withdrawn to its fullest extent, as when unlatching from the outside, the leg of latch 1 is pulled up to the escutcheon and the notch 13 brought into position in which the pawl 11 can engage therewith. When this engagement is made, the spindle 6 is

locked, at the same time holding the latch 1 immovable and inoperative to engage with the hook 9, so that the door may be freely opened, as though it were not provided with a latching device.

Though I have shown the device as applied to a door opening only in one direction and shown the preferable form of hook or wedge shape latch adapted to this form of door, it is obvious that the device may be readily applied to a door opening in both directions and that a double hook or notch may take the place of the single-hook form shown in the drawings and the latch be modified to suit this latter form of application.

Other modifications may suggest themselves without departing from the invention herein disclosed. I therefore do not desire to confine myself to the exact form or proportion of parts herein shown; but

What I claim is—

1. In combination, a bell-crank latch, one of its arms adapted to engage with a suitable stop, the other provided with a contracted mouth-recess and a longitudinally-movable rod or bar having an enlarged end to engage with the contracted mouth of the recess suitably arranged whereby the latch is operated by motion in one direction only of the rod or bar, the latch being so connected that it may be operated from one side of the door independent of the movable rod or bar.

2. In combination, a bell-crank latch, one of its arms adapted to engage with a suitable stop, the other provided with a contracted mouth-recess and a longitudinally-movable rod or bar having an enlarged end to engage with the contracted mouth of the recess suitably arranged whereby the latch is operated by the motion in one direction only of the rod or bar and a pivoted latch or pawl adapted to engage with the rod or bar whereby through such engagement longitudinal motion of the rod or bar is prevented.

3. In combination, a latch adapted to engage with a suitable stop, a longitudinally-movable device suitably arranged to operate said latch by its motion in one direction only and a pivoted latch or pawl adapted to engage with the operating device in two positions whereby through such engagement longitudinal motion of the operating device is prevented and the said device is secured at either end of its motion by the pivoted latch or pawl.

4. In combination, a latch adapted to engage with a suitable stop, a longitudinally-movable device suitably arranged to operate said latch by its motion in one direction only and a pivoted latch or pawl adapted to engage with the operating device whereby through such engagement longitudinal motion of the operating device is prevented, said rod or bar being provided with more than one catching device to provide for locking said rod or bar in different positions by engagement with the latch or pawl.

5. In combination, a latch adapted to engage with a suitable stop, a longitudinally-movable rod or bar suitably arranged to operate said latch by its motion in one direction only and a pivoted latch or pawl adapted to engage with the rod or bar whereby through such engagement longitudinal motion of the rod or bar is prevented said rod or bar being provided with more than one catching device to provide for locking said rod or bar in different positions by engagement with the latch or pawl.

6. In combination, a latch adapted to engage with a suitable stop, a longitudinally-movable rod or bar having a lost-motion connection with the latch whereby it operates said latch by its motion in one direction only and a pivoted latch or pawl adapted to engage with the rod or bar whereby through such engagement longitudinal motion of the rod or bar is prevented, said rod or bar being provided with more than one catching device to provide for locking said rod or bar in different positions by engagement with the latch or pawl.

7. In combination, a bell-crank latch, one of its arms adapted to engage with a suitable stop, the other provided with a contracted mouth or recess and a longitudinally-movable rod or bar having an enlarged end to engage with the contracted mouth of the recess suitably arranged whereby the latch is operated by the motion in one direction only of the rod or bar and a pivoted latch or pawl adapted to engage with the rod or bar whereby through such engagement longitudinal motion of the rod or bar is prevented, said rod or bar being provided with more than one catching device to provide for locking said bar in different positions by engagement with the latch or pawl.

ELLIS J. ROOT.

Witnesses:
D. B. RICHARDS,
JESSE R. EOFF.