C. J. PARSONS.

LATCH.

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1,066,141. Patented July 1, 1913.

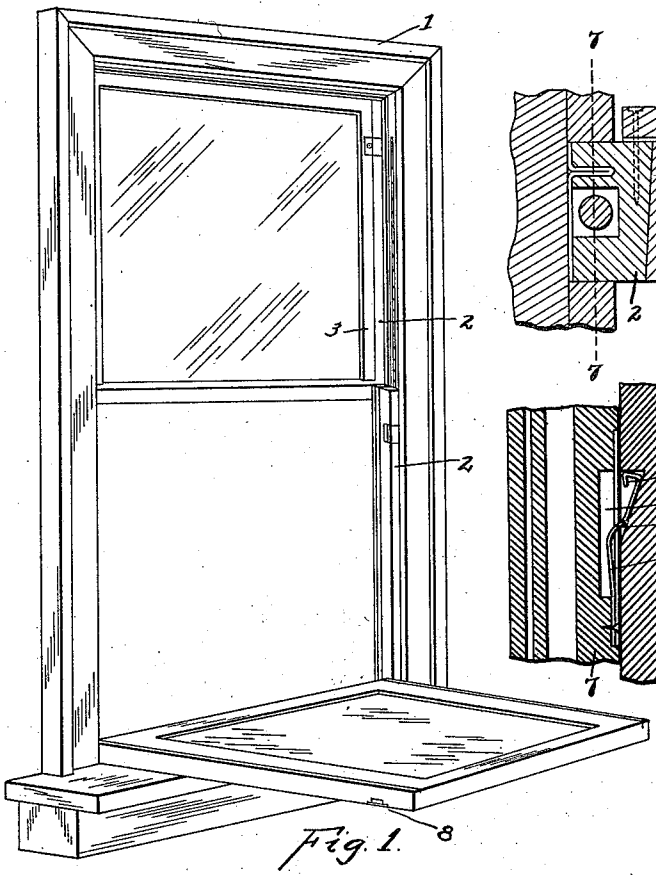

Fig. 1.

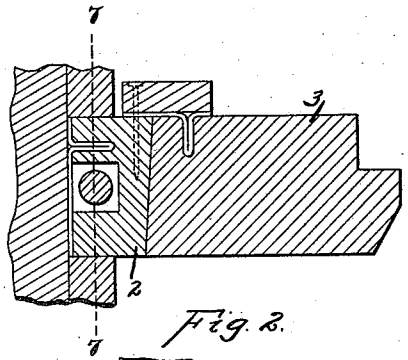

Fig. 2.

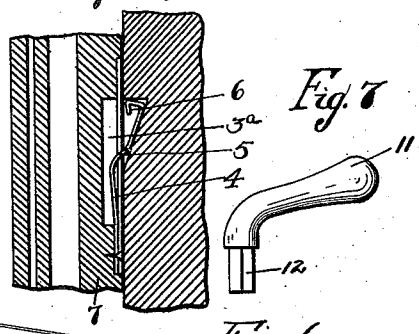

Fig. 7

Fig. 6.

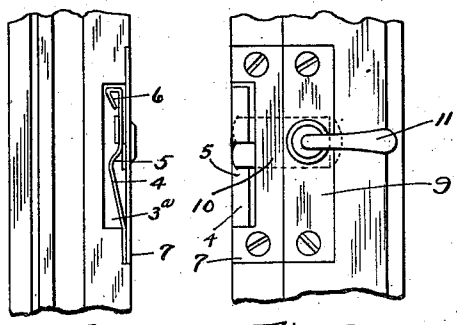

Fig. 4.

Fig. 3.

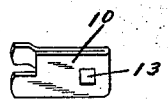

Fig. 5.

Witnesses

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LATCH.

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To all whom it may concern:

Be it known that I, CHARLES J. PARSONS, a citizen of the United States, residing at Linworth, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Latches, of which the following is a specification.

My invention pertains to latches and is particularly designed as an improvement in latches peculiarly adaptable and applicable to window sashes, being especially advantageous in use with sashes comprised of sliding elements and a main swinging element pivoted near its base. In windows of this structure, the swinging of the sash upon its hinges or pivots necessarily removes the major portion of the weight from the sliding members and leaves them with a tendency toward an upward movement. It is, therefore, desirable that there be provided some positive means of control that will normally operate to lock the swinging member of the sash to the sliding members and in such locking operation, will serve to positively release the latching device which is mounted upon the slide from engagement with the window frame. Likewise, my locking device is positively operative to move the latch into locking position by the unlocking of the hinged or pivoted member preparatory to swinging the same. Because of this positive movement of the latch element in both directions, it becomes a practical impossibility for the window slides to rise after the window sash proper has been swung upon its hinges and it likewise becomes a practical impossibility for the latch to fail of withdrawal when the hinged portion of the window sash is locked in position.

My invention has, therefore, two coördinate objects. The first of these is to provide a means for locking the pivoted portion of the sash to the slides. The second of these is to provide a means for preventing the sliding movement of the slides after the pivoted portion of the sash has been unlocked from the slides, such means being positively forced into operative position upon the unlocking of the pivoted portion of the sash from the slides. Therefore, I have adopted a resilient latch for accomplishing the second object, and a bifurcated control element desirably in the form of a double arm, for simultaneously locking the sash to the slides and unlocking the slides from the window frame.

The preferred embodiment of my invention is shown in the accompanying drawings, in which similar characters of reference designate corresponding parts, and in which:

Figure 1 is a perspective view of a window frame and sash with my locking device applied thereto and showing its preferred location, Fig. 2 is a detail horizontal sectional view showing the character of window structure to which my latch is preferably applied, Fig. 3 is a detail view of the window structure showing my latch device in operative position in elevation, Fig. 4 is a side view of my lock structure, Fig. 5 is a detail view of the bifurcated member utilized in the control of my latch, Fig. 6 is a removable handle used in the control of the bifurcated member in its movement into and out of operative position, and Fig. 7 is an end view partially broken away showing my latch in its locking position with the window casing.

In the drawings, the window frame is shown at 1 as being adapted for the reception of window sashes comprising slide members 2 upon which are pivotally supported sashes 3, the pivots being preferably located at or near the bottom thereof.

Carried in the upper end of each slide member 2 in a socket 3^a formed therein, is a latch member 4 desirably in the nature of a spring bar and fastened at one end. At a point substantially intermediate the extremities of this latch member, is a raised portion 5 and its upper and free end is desirably bent as at 6 to increase the rigidity thereof. The major portion of the socket is closed by a plate 7 and the unclosed portion is constructed to register with a notch determinately formed in the window frame, which notch is not shown. The swinging sash member is complementally notched as at 8 and this notch is likewise closed by a plate 9. Pivotally mounted within and upon such plate 9, is a bifurcated member 10 desirably of sheet metal and having its legs out of alinement and disposed one above the other. This member 10 is capable of a swinging action from a normal position within the notch 8 and behind the plate 9 to a position within the notch 3 and embracing the latch element 4. Such swing-

ing action is under the control of a handle 11 having a squared end 12 fitting in the squared socket 13 of the bifurcated member.

In operation, assuming that the lock is in the position shown in Figs. 3 and 4, the handle 11 is placed in operative position and moved upwardly. The result is that the lower leg of the bifurcated member first passes out of the path of the latch element 4 in its movement into operative position and the upper leg of the bifurcated member positively operates upon the enlargement on the latch element to force such latch element outwardly. Reversal of the operation moves the bifurcated member into embracing relation to the spring and positively withdraws such spring. It will of course be understood that these swinging actions of the bifurcated member either lock the swinging portion of the sash to the slide members or release such swinging portion. In the former operation, the latch element is positively withdrawn and in the latter operation, the latch element is positively moved into operative and latching position.

It will thus be seen that I have provided a structure which is inherently simple and which at the same time utilizes a spring latch, but does not depend for operation upon the resiliency of such latch, owing to the positive operation which necessarily follows from the structure outlined.

What I claim, is:

1. The combination of two latch carrying elements, one of them provided with a latch bar, the other provided with a turn-button adapted when the carrying elements are arranged in juxtaposition, to lock the two together and also adapted to positively engage the latch bar and to positively move it in or out of its operative position.

2. The combination of two latch carrying elements, one of them provided with a spring latch bar normally tending to project from the face of its carrier, the other provided with a turn-button adapted when the carrying elements are arranged in juxtaposition to lock the two together and also adapted to positively engage the spring latch and to move it positively into or out of its operative position.

3. The combination of two latch carrying elements, one of them provided with a spring latch bar secured at one end and normally tending to project its other end from the face of its carrier, the other element provided with a turn-button, projecting fingers on said turn-button adapted when the carrying elements are arranged in jaxtaposition to lock the two together and also adapted to embrace the spring latch bar and to positively move it into or out of its operative position.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES J. PARSONS.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."