J. A. GIESE.
SLIDING DOOR LATCH.
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2 SHEETS-SHEET 2.

S. SNSN S. SS

Fig. 4.

Fig. 5.

Fig. 6.

Witnesses
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SLIDING-DOOR LATCH.

1,029,748.


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To all whom it may concern:

Be it known that I, JAMES A. GIESE, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Sliding-Door Latches, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof, of the type disclosed in Letters Patent No. 1,095,886, issued in my name on September 10, 1911.

The invention relates to latches for sliding doors, its objects being to provide a simple and reliable latch for securing the door in either closed or open position and having the latch and keeper both so arranged as to avoid projecting parts when the door is open.

One form of the embodiment of the invention is hereinafter described and is illustrated in the accompanying drawings in which—

Figure 1 is a vertical sectional detail of the door and of the latch mechanism housed therein; Fig. 2 is a sectional detail on the line 2—2 of Fig. 1; Fig. 3 is a sectional detail on the line 3—3 of Fig. 1; Fig. 4 is a detail in perspective and partly in section of a door and the casing with the improved latch applied thereto; Fig. 5 is a vertical sectional detail of the door showing the latch for securing the door open, and Fig. 6 is a detail in perspective of the latch shown in Fig. 5.

A portion of the door is shown at 10. Portions of the door casing are shown at 11, 12. The latch mechanism for securing the door closed is housed within a casing 13 which is mortised into the front edge of the door and is secured thereto by means of screws passing through a face plate 13a integral with the body of the casing. Side plates 14, 15 cover lateral openings in the door 10. The plates 14, 15 are preferably secured together by means of screws, as 16, setting through one of them and in threaded engagement with posts, as 17, projecting inwardly from the other.

A latch 18 for securing the door in closed position is pivotally mounted upon a pin 19 extending transversely across the casing 13, the outer end of the latch lying within the chamber of the casing. This latch is controlled by means of a follower 20 fixed upon a spindle 21 projecting through the casing and the plates 14, 15 to the ends of which are applied the hubs of handles 22, 23. A spring 24 secured upon a stud 25 fixed in the side walls of the casing 13 bears downwardly upon the latch 18.

The latch 18 is adapted to cooperate with a suitable keeper, indicated at 26, carried by the jamb of the door casing. As shown, this keeper is housed within a vertical channel in the jamb located between the two longitudinal ribs 28, 30, and is represented as a common form of disappearing keeper, there being provided a reciprocating bar adapted to be engaged by the edge of the door as it closes and forced in for advancing the keeper.

A lug 41 projects downwardly from a hub 42 carried by the spindle 21. A key controlled vertically reciprocating bolt 43 housed within the depending portion 44 of the casing 13 may be thrown upward into the path of the lug 41 thus preventing the turning of the spindle for raising the latch 18 and locking the door in closed position.

For securing the door in open position there is provided a latch 45 having a downwardly projecting lip 46 and a beveled end, this latch being pivoted, as shown at 47, within a casing 48 mortised into the rear edge of the door. The latch 45 is controlled by means of the spindle 21, a rearwardly projecting arm of the follower mounted thereon, a lever 51 pivoted upon the pin 19, a bell crank 52 pivotally mounted within the casing 13, one arm thereof resting upon the upper side of the lever 51 and the other arm thereof being connected by means of a link rod 53 housed within a suitable channel in the door, with a lateral arm 54 of the latch 45. A spring 55, preferably as shown, integral with the spring 24 holds the latch 45 in advanced position by bearing upon one of the arms of the bell crank 53. The springs 24 and 55 hold the latch 18 and the lever 54 against the arms of the follower with which they respectively cooperate and thus prevent rattling of the parts. When the door is thrown wide open the latch 45 automatically engages the keeper 49 and securely holds the door in this position. Forward pressure on one of the handles 22 or 23 will release the latch 45 and close the door.

By the construction described the latching mechanism is easily controlled and by the most natural and obvious movement of
the hand of the user, requiring the exercise of no skill or instructions; the door is firmly secured in either closed or open position; and there is entire absence of protruding latch ends, hooks or other parts liable to catch the clothing.

I claim as my invention—

1. In a door securing device, in combination, a forwardly directed pivoted latch, a rearwardly directed pivoted latch, a lever, a link connecting the lever with the second named latch, a two armed oscillatable follower, the arms thereof cooperating in alternation with the first named latch and the lever, and a hand controlled spindle for oscillating the follower.

2. In a door securing device, in combination, a forwardly directed pivoted latch, a rearwardly directed pivoted latch, a lever, a link connecting the lever with the second named latch, a two armed oscillatable follower, the arms thereof cooperating in alternation with the first named latch and the lever, a hand controlled spindle for oscillating the follower, and a locking bolt for holding the follower against action on first named latch.

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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."