

June 24, 1930.

S. DE VITA

1,768,193

DOOR LATCH

Filed May 11, 1928

Fig. 2.

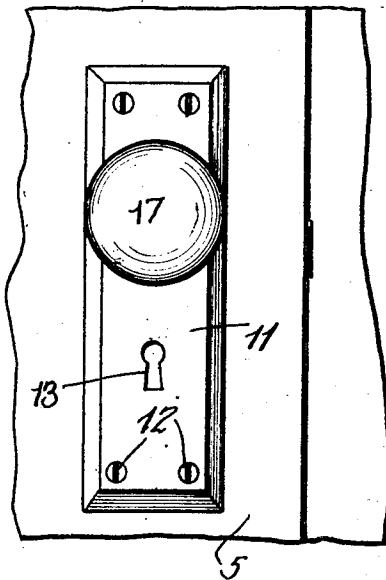


Fig. 1.

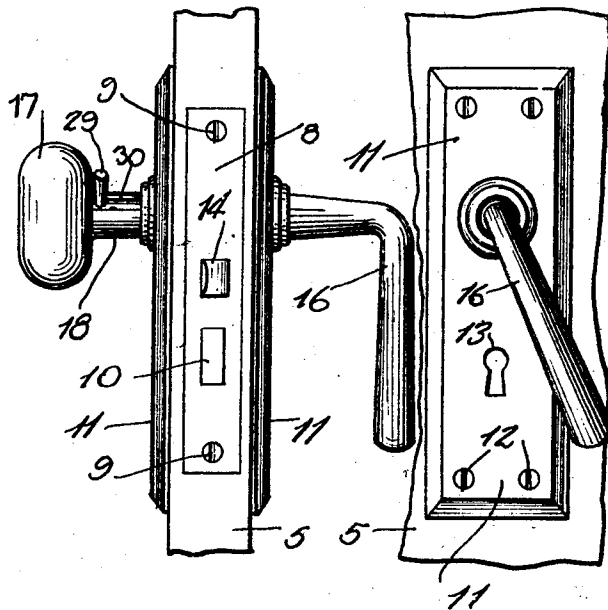


Fig. 3.

Fig. 4.

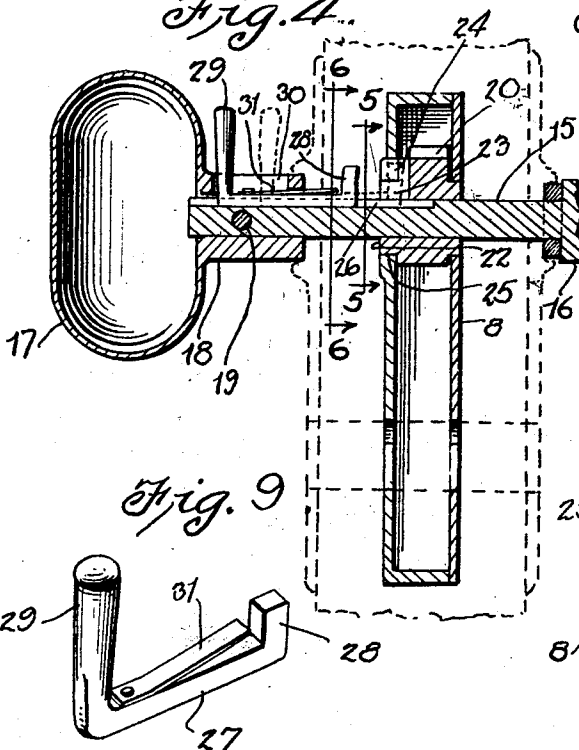


Fig. 5.



Fig. 6.

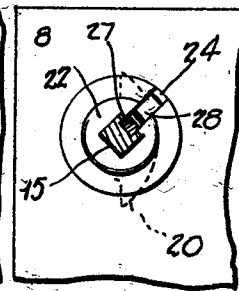


Fig. 7.

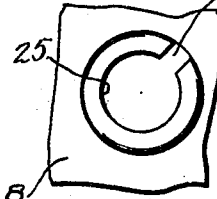


Fig. 8.

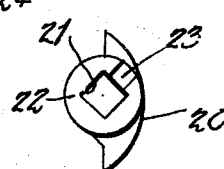
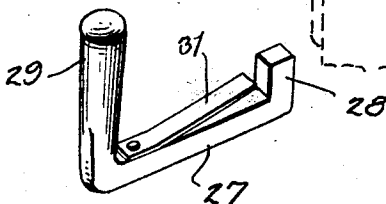


Fig. 9.



INVENTOR.
Salvatore De Vita.
BY
Bryant & Lundy
ATTORNEYS

UNITED STATES PATENT OFFICE

SALVATORE DE VITA, OF PHILADELPHIA, PENNSYLVANIA

DOOR LATCH

Application filed May 11, 1928. Serial No. 276,925.

This invention relates to door latches of the type adapted to be fitted in a mortise in the free edge of a door and having a knob operated latch bolt for releasably holding the door closed when locking of the same is not desired.

More particularly, the present invention contemplates the provision of simple and efficient means for dogging the knob spindle against turning with the latch bolt projected and from the inner side of the door, whereby operation of the knob or handle at the outer side of the door and retraction of the latch bolt may be effectively prevented.

The primary object of the present invention is to provide a knob or latch spindle dogging means of the above kind which is extremely simple in construction, efficient and reliable in operation, and capable of economical embodiment in conventional forms of mortise blocks.

The invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:—

Figure 1 is a fragmentary edge elevational view of a door having a mortise lock provided with latch spindle dogging means embodying the present invention;

Figure 2 is a fragmentary side elevation looking toward the right of Figure 1 at the inner side of the door;

Figure 3 is a somewhat similar view looking toward the left of Figure 1 at the outer side of the door;

Figure 4 is an enlarged fragmentary vertical transverse section with parts omitted, and revealing details of the spindle dogging means;

Figure 5 is a vertical fragmentary section taken on line 5—5 of Figure 4;

Figure 6 is a fragmentary section taken on line 6—6 of Figure 4;

Figure 7 is a view similar to Figure 5 with the latch spindle and latch bolt actuator removed;

Figure 8 is a side elevational view of the latch bolt actuator; and

Figure 9 is an enlarged perspective view of the dog for the latch spindle.

Referring more in detail to the drawing, 5 indicates an ordinary swinging door in the free edge of which is provided a mortise within which is fitted a conventional mortise lock having a casing 8 fastened in place by screws 9 entering the edge of the door and flanges on the front wall of the lock casing. The lock is provided with the usual lock bolt 10 adapted to be retracted or projected by the use of a suitable key inserted through key holes at opposite sides of the door and communicating with key holes in the sides of the lock casing 8 as well as in the escutcheon plates 11 fastened on opposite sides of the door 5 by screws 12 or the like. The key holes in the escutcheon plates are indicated at 13, but the details of the mechanism for projecting and retracting the bolt 10 are omitted as they are conventional and well known in the art.

Slidable through the front wall of the lock casing 8 is the usual latch bolt 14 which is spring projected, and which is operatively connected with a transverse knob or latch spindle 15 for manual retraction. This spindle has an integral handle 16 on its outer end, while a removable knob 17 is fitted on the inner end thereof, the socket 18 of the knob 17 being secured on the spindle by means of the usual fastening screw 19. Arranged in the upper part of the lock casing 8 and having the opposite ends of the hub thereof journaled in bearing openings in opposite side walls of the lock casing 8 is the usual latch bolt actuator 20. The spindle 15 is of polygonal cross-section, preferably square, and extends through a similar opening 21 in the hub of the actuator 20 so that turning of the spindle will effect turning of the actuator for causing retraction of the latch bolt 14 as is well known in the art. As is usual in the assembly of devices of this kind, the spindle 15 is inserted through the lock casing and the opening 21 in the hub of the actuator 20 from the outside of the door, the knob 17 being then applied and fastened on the inner end of the spindle 15 by use of the screw 19.

In accordance with the present invention, the inner end portion 22 of the hub of the

actuator 20 is provided with a radial slot 23 normally alined with a notch or slot 24 provided in the inner wall of the lock casing 8 and extending outwardly from the adjacent bearing opening 25 for the inner end portion 22 of the actuator hub. It is thus apparent that the slots 23 and 24 aline when the knob spindle 15 is normally positioned with the latch bolt 14 projected.

Provided in one side of the inner end portion of the spindle 15 is a longitudinal groove 26 in which is slidably fitted a dog 27 having an outturned end or outwardly directed lug 28 at its inner end and provided with a rigid outwardly projecting handle or finger piece 29 on its outer end. Provided in the socket 18 of the knob 17 is a longitudinal elongated slot 30 through which the finger piece or handle 29 projects and in which the latter is freely slidable. Attached to the upper or outer side of the dog 27 is a leaf spring 31 having a free inner end and disposed coextensive with the bolt 29 within the socket 18. This spring serves to yieldingly hold the dog 27 firmly within the groove 26 in all positions of its sliding movement, and when the dog 27 is in its outermost position as shown in Figure 4, the lug 28 is disposed outwardly of the slots 23 and 24 and free manual turning of the spindle 15 by either the handle 16 or the knob 17 is permitted. However, by engaging the handle 29, the dog 27 may be manually slid inwardly or toward the lock casing 8 so that the lug 28 enters the registered slots 23 and 24, thereby effectively locking the actuator 20 and spindle 15 against turning. As the dog 27 is not accessible from the outside of the door, the device serves to effectively prevent the door from being opened by a person at the outer side of the door, even though the lock bolt 10 is not projected. It is thus apparent that one may readily prevent opening of the door even though the person at the outer side of the door is equipped with a proper key for retraction of the lock bolt 10, although the party at the inner side of the door may readily release the spindle 15 when desired by retracting the dog 27 from the dotted line position of Figure 4 to the full line position thereof.

In view of the foregoing it will be seen that I have provided a simple and efficient means for permitting a person at the inner side of a door to readily dog the latch spindle against turning, whereby manipulation of the outside handle 16 and retraction of the latch bolt 14 is prevented. Moreover, the construction is extremely simple and compact, can be embodied in conventional lock constructions readily and cheaply, and is thoroughly reliable and efficient for the intended purpose.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:—

In combination with the casing of a mortise lock having a latch spindle provided with a longitudinal groove in its inner end, said lock casing having a spring projected latch bolt and an actuator keyed on the spindle for retraction of the latch bolt when the spindle is turned, the inner side of the lock casing and the actuator having normally registered slots, a dog slidable in the groove of the spindle and normally disposed outwardly of the lock casing, a right angularly projecting lug at the inner terminal end of the dog adapted upon inward sliding movement of said sliding dog to enter the registering slots of the actuator and the lock casing to lock the spindle and actuator against turning and be limited in the sliding movement by the lug engaging the bottom wall of the slot in the actuator, a knob secured on the inner end of the latch spindle and having a socket provided with a longitudinal elongated slot closed at its outer end, an outwardly projecting handle on the outer end of the dog slidably projecting through said elongated slot, and a leaf spring attached to the outer side of the dog and extending within the socket of the knob with its inner end free.

In testimony whereof I affix my signature.

SALVATORE DE VITA.