

A. LAWRENCE.
MORTISE LOCK.

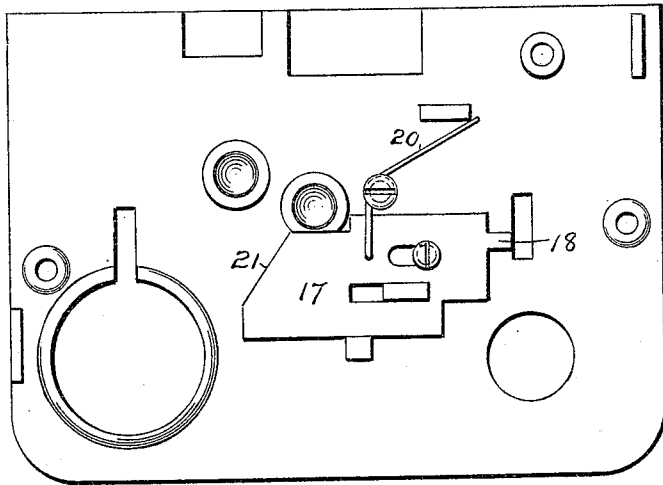
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950,108.

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2 SHEETS—SHEET 2.

~~Fig. 3.~~



WITNESSES
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MORTISE-LOCK.

950,108.

Specification of Letters Patent.

Patented Feb. 22, 1910.

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To all whom it may concern:

Be it known that I, ALFRED LAWRENCE, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Mortise-Locks; and I do hereby declare the following to be a full, clear and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in mortise locks, the object being to provide a lock wherein the latch bolt may be dogged against movement by the outer knob, and the slide, which dogs the outer knob, be itself dogged, so as to prevent a release of same by the pressure of any instrument introduced between the strike plate and the face of the lock, thus absolutely preventing a retraction of the latch bolt from the outside, except by the use of the proper key.

With these ends in view my invention consists in the parts and combinations of parts as will be more fully explained and pointed out in the claim.

In the accompanying drawings, Figure 1 is a view of the lock with the removable side of the casing removed, showing the dogging plate, which is carried by the removable side, dogging the outer knob locking slide. Fig. 2 is a similar view showing the dogging plate in the position it occupies when the door is open, and Fig. 3 is a view of the removable side of the casing showing the plate thereon.

In the drawings I have shown a spring latch bolt 1, that can be retracted by a key through the pivoted bell crank levers 2 and 3 the latter engaging the bolt near its head, and by inner and outer knobs, each knob being mounted on its own shaft, the two shafts being located end to end and connected so as to prevent endwise separation. Each knob shaft is mounted in a roll back, adapted to engage shoulders 4 on the sliding carriage 5, the said shoulders 4 engaging the cross head 6 on the rear end of the bolt shank, for moving the bolt rearwardly. In addition to these parts the lock shown has an auxiliary bolt 7 which latter engages the strike plate and is forced inwardly as the door is closing and remains so while the door is closed. The sliding movement of this auxiliary bolt releases a spring pressed

dog 8 the end 9 of which engages a shoulder 10 on the latch bolt and dogs the latter thus preventing the bolt from being retracted by the introduction of a thin blade or other instrument between the face plate of the lock and the strike plate. The dog is connected to the key and knob actuated mechanisms, so that when either knob or key is turned, the end of the dog will be withdrawn from the path of the bolt, thus permitting the latter to be retracted.

The roll back of the outer knob is provided with a projecting flange 12 having a recess 13 for the reception of the free end of the stop work which comprises slide 14 having a push button end 14^a and an idle slide 15 having a similar push button end, the two slides being connected by the pivoted lever 16, so that when slide 14 is "in", and is dogging the roll back of the outer knob, slide 15 will be "out" and by pushing the latter in the slide 14 will be withdrawn from recess 13 thus leaving the bolt free to be retracted by the outer knob.

The construction thus far described is old and is simply referred to, in order to show up the defect which my improvement is designed to remedy, and also to make clear the operation of the lock as a whole.

With this construction the bolt is positively deadlocked against movement, by the insertion of a thin blade or other instrument between the face plate of the lock and the strike plate, and the bolt may be deadlocked against the outer knob, by the slide 14, but no provision has been made for preventing this dead-locking device for the outer knob, from being thrown off by pushing in slide 15, which can be done by an instrument inserted between the face and strike plates.

This invention therefore consists in means for deadlocking the slide 14 either in its "in" or "out" position, and it comprises a sliding plate 17 mounted to slide on the cover plate of the lock. This plate is provided at its end with a toe 18 which latter is adapted to enter the slot 19 formed in a projection from slide 14 when the latter is dogging the outer knob roll back, and absolutely prevent any endwise movement of said slide, and consequent release of the dogging mechanism by any manipulations from the outside of the door. The plate 17 is normally held with its toe 18 out of the path of movement

of slide 14 by the spring 20, and is provided at its rear end with an incline 21 against which the lug 22 on auxiliary bolt 7 bears. The lug 22 normally rests near the lower end of the incline 21, and as the bolt is pushed inwardly by its contact with the strike plate of the lock, the lug moving in contact with said incline 21 moves the plate 17, thus carrying the toe 18 into either slot 19 thus deadlocking the slide in its "in" or dead locking position, or in rear of the projection having the slot 19 therein, thus locking the slide in its "out" position. Hence when the door is in its closed position the stop-work is positively deadlocked in either position it happens to be in and cannot be actuated from the outside.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction of parts shown and described, but,

Having fully described my invention what

I claim as new and desire to secure by Letters-Patent, is:—

In a lock the combination with a main bolt, an auxiliary bolt, the latter adapted to be forced inwardly by the closing of the door and remain so while the door is closed, and knob mechanism for retracting the main bolt, of a longitudinal movable slide adapted to be moved to a position to deadlock the outer knob, one end of said slide projecting through the face plate of the lock, and a sliding plate moved transversely in one direction by the inward movement of the auxiliary bolt and provided with a toe adapted to engage the dead locking slide and prevent it from being moved longitudinally, and a spring for moving said sliding plate away from the deadlocking slide.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ALFRED LAWRENCE.

Witnesses:

WM. P. MOSELY,
SCHUYLER MERRITT.