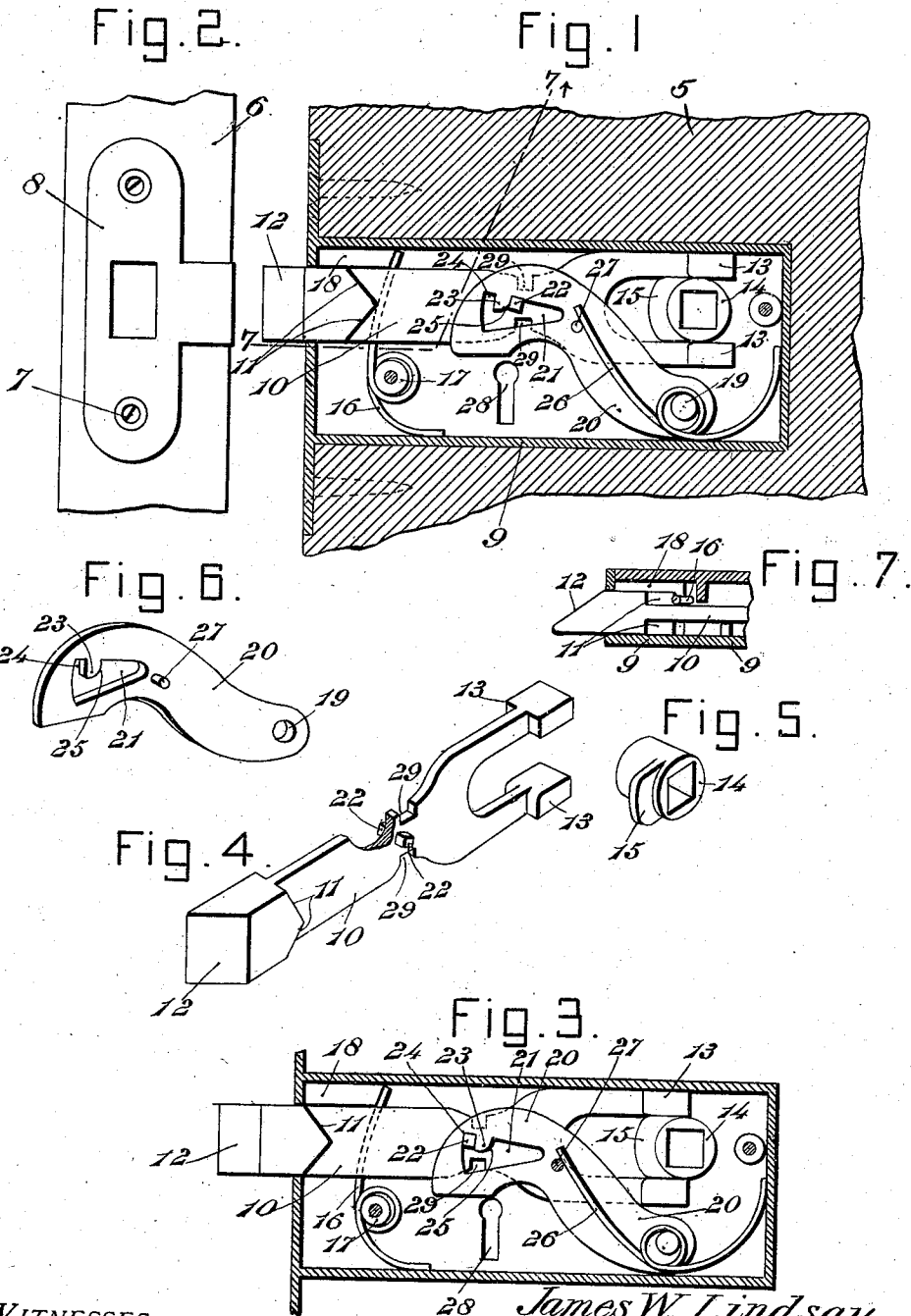


J. W. LINDSAY.
COMBINED LOCK AND LATCH.
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UNITED STATES PATENT OFFICE.

JAMES W. LINDSAY, OF RIVERSIDE, CALIFORNIA.

COMBINED LOCK AND LATCH.

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To all whom it may concern:

Be it known that I, JAMES W. LINDSAY, a citizen of the United States, residing at Riverside, in the county of Riverside and State of California, have invented a new and useful Combined Lock and Latch, of which the following is a specification.

This invention relates to mortise locks for doors and similar closures, and has for its object to provide a combined lock and latch in which a sliding bolt or latch is operated by a knob or spindle and locked by projecting it from the latched position by a key.

A further object of the invention is to provide a lock having a pivoted dog or tumbler normally held in inoperative position to permit free sliding movement of the latch and movable into engagement with a pin on the latch for locking the latter against accidental movement.

A still further object of the invention is to provide a reversible latch having a spring bearing against one end thereof and normally projecting the inclined or beveled end of the latch beyond the casing, and means for disengaging the spring from the latch when the latter is in locked or projected position.

In the accompanying drawings forming a part of this specification, Figure 1 is a longitudinal sectional view of a combined lock and latch constructed in accordance with my invention, and showing the same in latched position; Fig. 2 is a front elevation of the door casing. Fig. 3 is a longitudinal sectional view showing the latch locked in projected position; Fig. 4 is a perspective view of the latch or bolt detached; Fig. 5 is a perspective view of a knob-receiving spindle or barrel; Fig. 6 is a similar view of the pivoted locking dog or tumbler; Fig. 7 is a longitudinal view taken on the line 7-7 of Fig. 1.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The improved lock is preferably designed as a mortise lock and by way of illustration it is shown applied to a door of ordinary construction in which 5 designates a portion of the door and 6 a portion of the door casing to which is secured as by screws or similar fastening devices 7, a keeper 8.

The lock consists of a suitable casing or housing 9 in which is mounted for sliding movement a reversible latch or bolt 10 the latter being provided with inclined shoulders 11. One end of the latch is inclined or beveled as indicated at 12 while the opposite end thereof is bifurcated and provided with terminal lugs 13. Journalled in suitable openings in the casing is a knob-receiving barrel or hub 14 having a cam face 15 adapted to engage the lugs 13 when the knob is rotated and thus move the latch to operative or inoperative position. The free or inclined end of the latch is normally projected a short distance beyond the face of the lock casing by means of a spring 16 secured

to the stud or pin 17 and having one end thereof bearing against the casing and an intermediate portion thereof disposed in contact with the inclined shoulders 11, the opposite end of the spring being extended towards the top of the casing for engagement with a lug or projection 18.

Pivotaly mounted within the casing as indicated at 19 is a locking dog or tumbler 20 having a recess 21 formed in the free end thereof for the reception of a pin or arm 22 extending laterally from the latch or bolt 10 as shown. The dog is provided with a depending lug 23 defining a locking recess 24 adapted to engage the pin 22 when the dog is moved to operative position, and thus prevent accidental sliding movement of the latch or bolt. The pin 22 is free to slide within the recess 21 when the latch is used in the ordinary manner and engages the recess 24 when the tumbler or dog is actuated to lock the bolt in projected position, the free end of the lug 23 being inclined or rounded as indicated at 25 to permit the pin to clear said lug. Mounted on the pivot pin 19 is a spring 26 which engages a boss 27 on the locking dog and causes the dog to yieldably engage the pin 22.

The operation of the device is as follows: Under ordinary circumstances the latch may be reciprocated within the casing by turning the door knob in either direction which causes the cam face 15 to engage the lugs 13 and withdraw the inclined edge of the latch within the casing to permit the free opening and closing movement of the door. When it is desired to lock the latch in projected position the key is inserted in the opening 28 and rotated thereby causing the key to first engage and lift the dog and subsequently engage the key-ward 29 and project the bolt, the spring 26 serving to depress the locking dog and cause the pin on the latch to enter the locking recess 24 and thus secure the bolt in locked or projected position. Attention is called to the fact that by having one end of the spring 16 bearing against the lug 18, tension on the bolt or latch is relieved when the latter is in locked position so that the key may be rotated to release and withdraw the bolt without undue friction.

From the foregoing description it is thought that the construction and operation of the lock will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. A lock comprising a casing, a latch slidably mounted within the casing and provided with oppositely disposed inclined shoulders, a lug secured to the casing and extended beyond said shoulders, said lug having its free end inclined, a spring bearing against the apex of said shoulders and engaging the inclined end of said lug, a pin extending laterally from the opposite sides of the latch, means for operating the latch, a locking dog pivotaly

- mounted within the casing and provided with a locking recess adapted to receive the pin for locking the latch in projected position, and a spring bearing against the locking dog.
- 5 2. A lock comprising a casing, a latch slidably mounted within the casing and provided on its opposite longitudinal edges with oppositely disposed aligned key-wards, one end of the latch being inclined or beveled and the opposite end thereof bifurcated and formed with terminal lugs, a
- 10 knob receiving spindle journaled in the casing and provided with a cam face operating in the bifurcated end of the latch and adapted to engage the lugs for actuating said latch, a pin extending laterally on both sides of the latch and disposed between said key-wards, a spring bearing against the inclined end of the latch, a dog pivotally
- 15 mounted within the casing and provided with an opening for the reception of the pin, a lug projecting within the opening and defining a locking recess, said locking recess being adapted to engage the pin for locking the bolt
- 20 in projected position.
3. A lock comprising a casing, a reversible latch slidably mounted in the casing and provided on its opposite longitudinal edges with aligned key-wards, one end of the

latch being bifurcated and provided with terminal lugs and the other end thereof formed with inclined shoulders on each side of said latch, a lug secured to the casing and projecting beyond the apex of the inclined shoulders, a spring bearing against the apex of the shoulders on one side of the latch and engaging said lug, pins extending laterally from the opposite side faces of the latch and disposed between the key-wards, a locking dog having an opening formed therein for the reception of one of the pins, a lug projecting within the opening and defining a locking recess, said lug having its free end inclined or beveled, and a spring engaging the locking dog for depressing said dog thereby to cause the locking recess to engage the adjacent pin on the latch and lock the latter in projected position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES W. LINDSAY.

Witnesses:

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WILLIAM H. EATON.