March 15, 1927. 1,620,775

C. F. MEILINK

LOCK

Filed Aug. 19, 1922

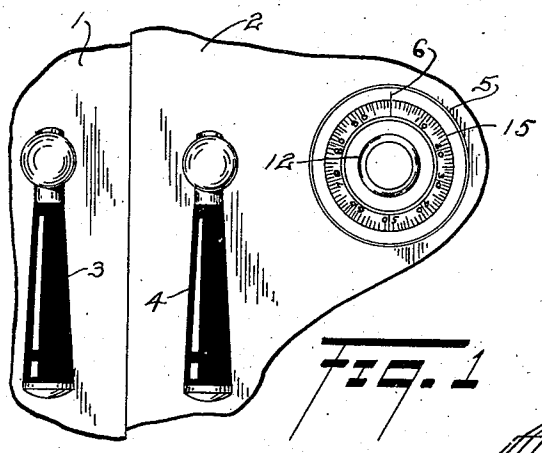


FIG. 1

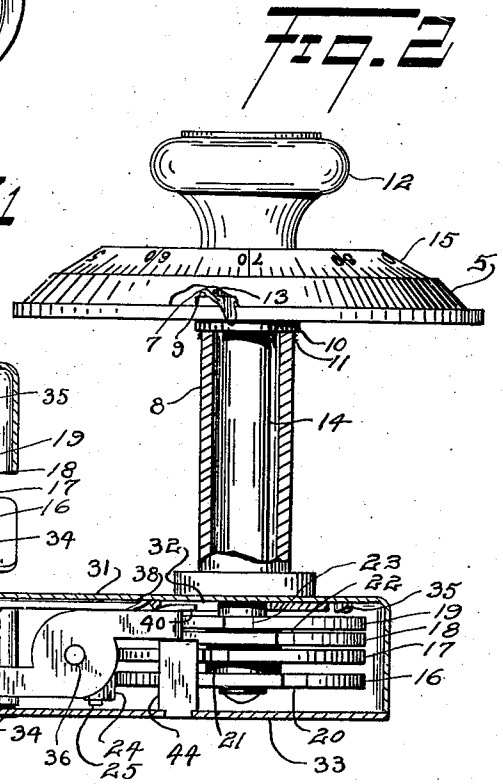


FIG. 2

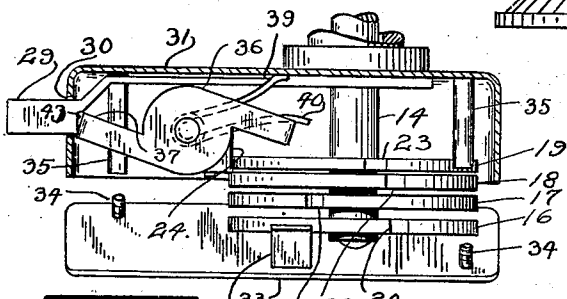


FIG. 3

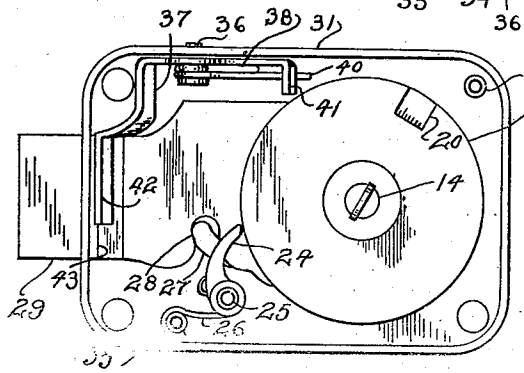


FIG. 4

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Patented Mar. 15, 1927. 1,620,775

UNITED STATES PATENT OFFICE.

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LOCK.

Application filed August 19, 1922. Serial No. 582,867.

This invention relates to bolt holding devices in locks.

This invention has utility when incorporated in connection with tumbler locks wherein the tumbler operated spindle may shift a bolt, there being supplemental provision precluding bolt shifting when thrown by any attempt to force the spindle.

Referring to the drawings—

Fig. 1 is a fragmentary view of a double door safe or vault having an embodiment of the lock as herein disclosed;

Fig. 2 is a view on an enlarged scale, parts being broken away, of the spindle and the lock mechanism associated therewith;

Fig. 3 is a view similar to Fig. 2 as to the lock mechanism wherein attempt has been made to force the spindle which has resulted in the bolt being held thrown; and

Fig. 4 is a back or rear view of the lock with the back plate removed.

The fire or burglar proof safe is provided with doors 1, 2, having multiple bolt throwing handles 3, 4. The operation of the handle 4 for throwing the bolts which hold the doors against shifting as to the safe door frame is precluded by positioning a bolt from a tumbler lock mechanism.

As herein disclosed the door 2 is provided with a plate 5 carrying an index mark 6. This plate 5 is about opening 7. Through this opening 7 extends sleeve 8 anchored therein by lock nuts 9, 10, upon threaded portion 11 of this sleeve 8. Knob 12 is provided with bearing 13 for centering spindle 14 in the sleeve 8. Fixed with the spindle knob 12 and the spindle 14 is a graduation carrying plate 15 rotatable as to the index or pointer 6 in rotating tumbler 16, and thereby shifting successive tumblers 17, 18, and 19, brings their respective notched portions 20, 21, 22, 23, into registry with dog 24 and by clockwise movement of the spindle 12 positively shifts the dog 24. This dog 24 is mounted on fixed pin 25 and by spring 26 is normally urged into notch engaging position. Fixed with this dog 24 is lug 27 coacting with recess 28 in reciprocable bolt 29, whereby the clockwise movement of the spindle knob 12 may normally effect withdrawal of the bolt 29 as the tumblers have their several notches brought into registry to receive the dog 24. This bolt 29 is held for reciprocable movement by opening 30 in lock housing 31 and by opening 32 through the bolt to ride over the spindle 14. The lock housing 31 is provided with a cover plate 33 which is anchored into position by screws 34 engaging posts 35 carried by the housing 31.

Upon a side wall of the housing 31 is fixed bearing pin 36 as a fulcrum for lever 37. About this fulcrum 36 is a torsion spring 38 having one end 39 engaging the bottom of the lock housing 31. The other end 40 of this torsion spring 38 engages offset portion 41 of this lever 37, and accordingly normally tends to throw the remote free end or offset portion 42 of this lever 37 into engagement with shoulder 43 of the bolt 29. This engagement of the bolt 29 by this holder or lever 37 is in the thrown position of the bolt 29. This holder lever 37 is normally held in the position shown in Fig. 2 away from interfering with the normal throw and withdrawal of the bolt 29, for the cover plate 33 has thereon projection 44 which may engage the offset 41 and so hold the lever 37 against the action of the spring 38 that the offset end 42 is clear of the bolt 29.

The safety device value of this bolt holder 37 arises from the fact that in attacks upon burglar proof structures, the projecting knob 12 of the spindle is sometimes broken off or effort made to break such and when broken it is not unusual to attempt to force the spindle 14 inward for the purpose of releasing the tumblers so that the bolt 29 will be free and permit the rocking of the handle. However, in this construction, at once the spindle 14 is thrust inward to push the cover plate 33, such cover plate as released takes with it the projection 44 and allows the spring 38 to positively lock the bolt 29 against withdrawal as the offset end 42 comes against shoulder 43 of the bolt 29. There is accordingly provided in this construction a simple safety device or guard in the way of a protection to tumbler locks as used in safe or vault work.

What is claimed and it is desired to secure by United States Letters Patent:—

A door having a wall, a spindle through said wall, a lock housing section into which the spindle extends, tumblers in said section about said spindle, a sleeve for the spindle abutting the housing section about the spindle and axially of which sleeve the spindle is shiftable into said section with said tumblers, a closure section for the housing section axially beyond the spindle, a projec-

tion fixed with said closure section, a bolt mounted in the housing section for shifting radially of the spindle to protrude from said housing section, said bolt having a ledge in the housing section, a catch pivotally mounted in the housing section, and a torsion spring swinging said catch into held position against said projection and coacting as said projection is displaced by axial shifting of the spindle as to the sleeve to swing the catch into engagement with said bolt ledge to preclude withdrawal of the bolt.

In witness whereof I affix my signature.

CHARLES F. MEILINK.