

A. HUDY.  
LOCK.

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1,368,630.

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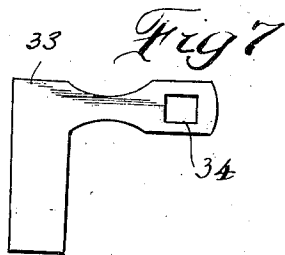
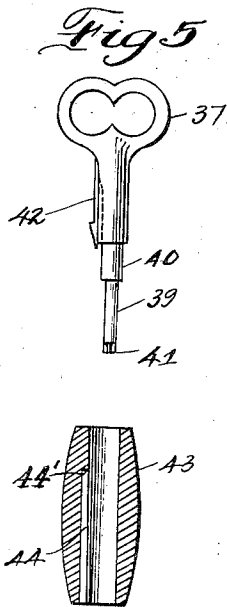
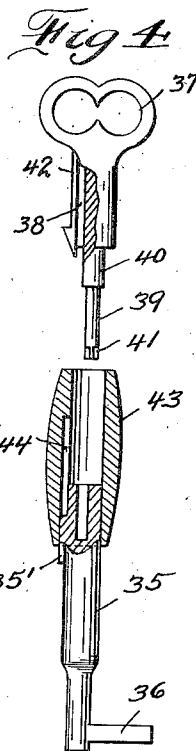
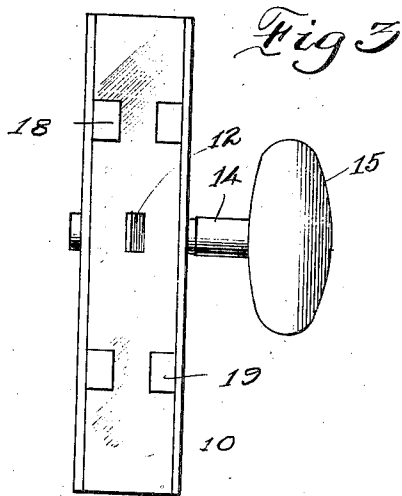
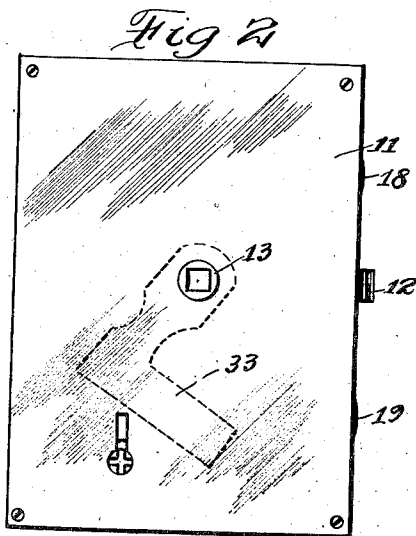
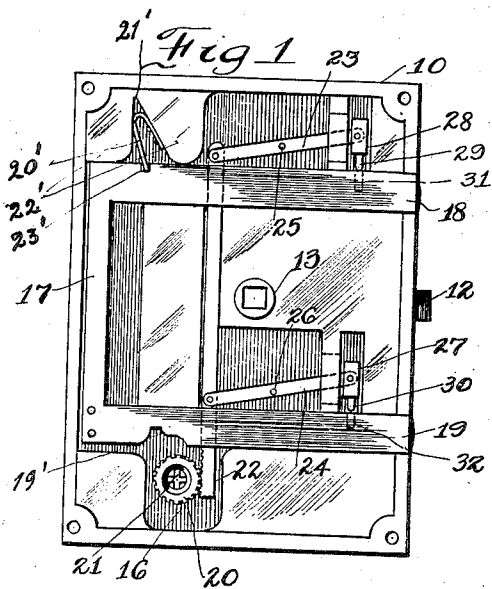


Fig 6

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# UNITED STATES PATENT OFFICE.

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## LOCK.

1,368,630.

Specification of Letters Patent. Patented Feb. 15, 1921.

Application filed January 28, 1919. Serial No. 273,518.

To all whom it may concern:

Be it known that I, ANTONI HUDY, a citizen of Russia, residing at 85 28th Street, Detroit, Wayne county, Michigan, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locks and particularly to such types as are used in securing the doors of dwellings and the like against intrusion.

The object of the invention is to provide a new and improved lock more especially designed as a mortise lock for use on house doors and the like and arranged with a number of simultaneously actuated bolts to permit securely locking the door against opening by burglars and other unauthorized persons.

Another object of the invention is to provide a lock which is simple and durable in construction and not liable to get out of order easily.

A still further object of the invention is to provide a lock, the bolts of which can be secured against sliding motion by means especially devised to accomplish this purpose and the key-hole of which can be closed against the entrance of a key and peeping.

These and other objects are attained by the novel construction and combination of parts hereinafter described and shown in the accompanying drawing, forming part of this specification, in which:—

Figure 1 is a plan view of a lock made in accordance with the invention, the cover plate being removed.

Fig. 2 is an end view of the lock.

Fig. 3 is a front view thereof with the cover plate in position.

Fig. 4 shows a key used to manipulate the lock.

Fig. 5 shows a key for operating the bolt locking mechanism.

Fig. 6 shows a sleeve used in connection with the key.

Fig. 7 shows a device for closing the key-hole of the lock.

The casing 10 of the lock is provided with the customary cover 11 adapted to be secured thereto by means of screws or the like, and the lock is provided with the usual latch bolt 12 controlled by a spindle 13 of a knob 15 secured to said spindle by the customary sleeve 14. A depression 16 is provided within the lock casing, in which is mounted a

slide 17, the upper and lower parallel horizontal bars 18 and 19 of which represent the sliding bolts. The lower, 19, of which is provided at its lower inner side with a peculiarly shaped recess 19' for engagement by a key for actuating said sliding bolts. A flat spring 20' located in a recess 21' is secured at one of its ends to one of the shoulders 22' forming said recess, while its other end, is bent upon itself and passed into a recess 23' in the upper bolt 18 near its inner end, said spring 20' tending to press the bolts 18 and 19 into their locking positions. A vertical bar 22, provided with teeth at its lower end is adapted to slide below the bolts 18 and 19, and is actuated by a gear 20 in mesh with the teeth on said bar which in turn is adapted to be operated or rotated by a key inserted into the cross-shaped hub 21 of said gear. Above the bolts 18 and 19 there are pivotally secured to said vertical bar the ends of arms 23 and 24 which in turn, intermediate their ends are pivotally secured to pins 25 and 26 provided in the depression of the lock casing. Pivotaly secured to the front or free ends of these arms are lugs 27 and 28 respectively provided with pins 29 and 30 respectively protruding from their lower ends, and adapted to enter suitable recesses 31 and 32 in the upper parts of the bolts 18 and 19, upon the operation of said arms and vertical bar 22 by a key. Upon the spindle 13 of the knob a key-hole guard 33 is secured by means of a square hole 34 formed in one of its shanks. The lock is operated by a key, generally indicated at 35, having the customary beard 36, and provided with a bore or slot 38. Upon this key 35 is keyed by means of a splint 35' a sleeve or barrel 43 provided at its inner wall with a longitudinal recess 44 for the reception of the splint 35' in its lower part, holding key and sleeve firmly but detachably together and the spring 42 of a key 37 in its upper part, which key is provided with a hook at its lower end and acting in the manner of a snap-hook. This key 37 intermediate its ends is provided with a depressed part forming a shoulder 40 and ends in a shank 39, the lower end of which is cross-shaped in cross-section to fit into the cross-shaped hub of the gear 20.

From the foregoing description it will be clear, that any person desiring to open the lock, must first separate the key 37 and key 35 by pressing the spring 42 inwardly

to disengage the hooked end thereof from its engagement with the shoulder 44' of the recess 44. When then the end 41 of the key 37 is introduced into the hub of the gear 5 it can operate the same to shift the vertical bar downward in order to release the pins 29 and 30 from their engagement with the bolts 18 and 19, whereafter the key 35 is used to engage the recess 19' for retracting 10 the bolt frame and the bolts which are then locked in their retracted position by means of the pins 29 and 30 which sliding along the upper edge of bolts 18 and 19 drop automatically by their own weight into the recesses 31 and 32. It will be clear that during 15 this operation the bolt frame is moved backward by the key 36 against the action of spring 20'.

While in the foregoing there has been 20 illustrated in the drawing and described in the specification such combination and arrangement of elements as constitute the preferred embodiment of this invention, it is clear that such minor changes may be 25 made in the elements coming within the scope of the invention without departing from the spirit thereof.

Having thus described my invention, what I claim is:—

30 1. In a lock, the combination with a casing and a pair of latch bolts forming a frame slidable therein, a spring for normally projecting said bolts into their locking 35 position, a depression in said casing, a vertical bar provided with teeth at its lower end adapted to slide in said depression, pins within said depression, arms pivotally secured to said vertical bar and to said pins, lugs secured to the free ends of said arms, 40 pins extending from the lower ends of said lugs and adapted to be pressed into suitable recesses in said bolts for locking the same in their retracted position, means for disengaging said pins from said recesses and 45 means for retracting said bolts after such disengagement.

50 2. In a lock, the combination with a casing, and a pair of spring actuated latch bolts forming a frame slidable in said casing, a vertical bar slidable below said bolts within a depression of the casing and provided with teeth at its lower end, a gear meshing with the teeth of said bar, a cross-shaped hub on said gear grooved for the reception of a key cross-shaped in cross-section, and means connected with said bar for

locking the bolts in their retracted position upon the operation of said gear by a key, and means for projecting said bolts upon the disengagement of said locking means 60 from said bolts.

3. In a lock, the combination with a casing, and a pair of spring actuated latch bolts forming a frame slidable in a depression of said casing, means for retracting 65 said bolts from their locking position, means for locking said bolts in this position, means for releasing said locking means, means for projecting said bolts upon the release by said locking means, a knob on said casing, 70 and a key-hole-guard on the spindle of said knob for closing the key-hole opening.

4. In a lock, the combination with a casing having a depression therein, a frame 75 sliding in said depression, the horizontal bars of said frame constituting two latch bolts having recesses near their front ends in their upper edges, shoulders formed in said depression of the casing, a spring secured with one of its ends to one of said 80 shoulders, the other end bent upon itself and resting in a recess of one of said bolts, for normally holding said bolts in their projected position, a vertical rod slidable 85 in the depression of the casing behind said bolts, teeth at the lower end of said rod, a gear meshing with said teeth, a grooved cross-shaped hub on said gear adapted for the reception of the similarly shaped end of 90 a key for operating said rod, a recess in the lower bolt for the engagement by the beard of a key for retracting said bolts against the action of said spring, two arms pivotally secured with their inner ends to said rod above said bolts, pins in said depression 95 to which said arms are pivotally secured intermediate their ends, lugs pivotally secured to the outer free ends of said arms, pins extending from the underside of said lugs and adapted to enter corresponding recesses in 100 the upper edges of the bolts near their front ends, a knob, a spindle for said knob and a key-hole guard on said spindle.

In testimony whereof I have signed my name to this specification in the presence of 105 two subscribing witnesses, this 11 day of January, 1919.

A. HUDY.

Witnesses:

A. G. GRZEZINSKI,  
ANTONI DEKIE.