

J. F. BEATTY.

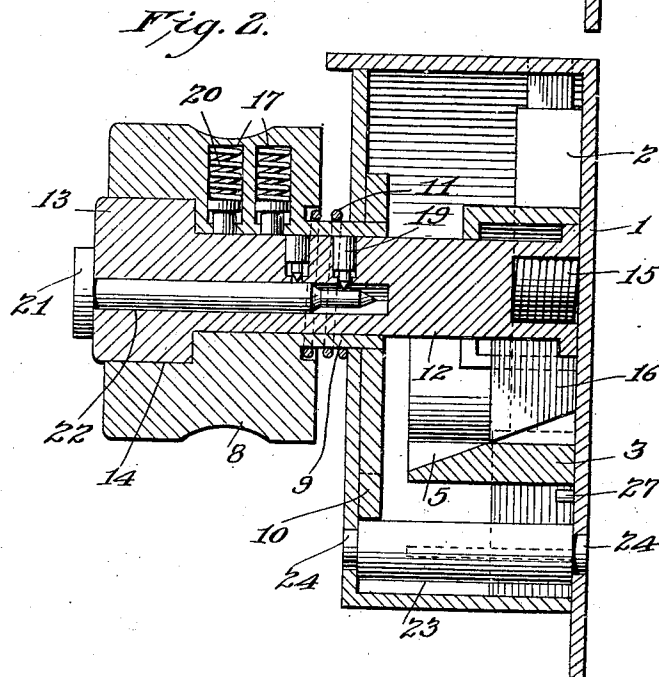
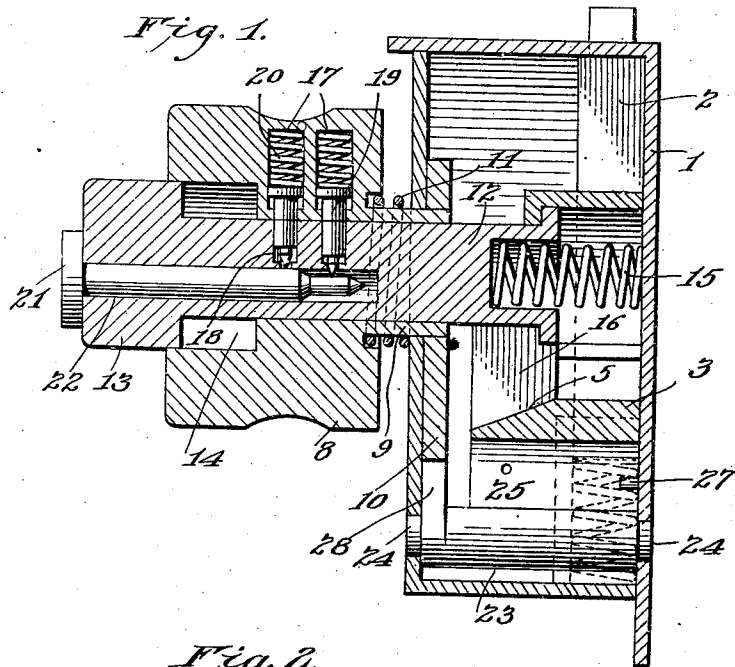
LOCK.

APPLICATION FILED JAN. 5, 1909.

937,756.

Patented Oct. 26, 1909.

3 SHEETS—SHEET 1.



Inventor

John F. Beatty

Witnesses

M. C. Lyddane
J. A. L. Mulhall

By

Joshua R. P. Potts

Attorney

LOCK.

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3 SHEETS—SHEET 2.

Fig. 3.

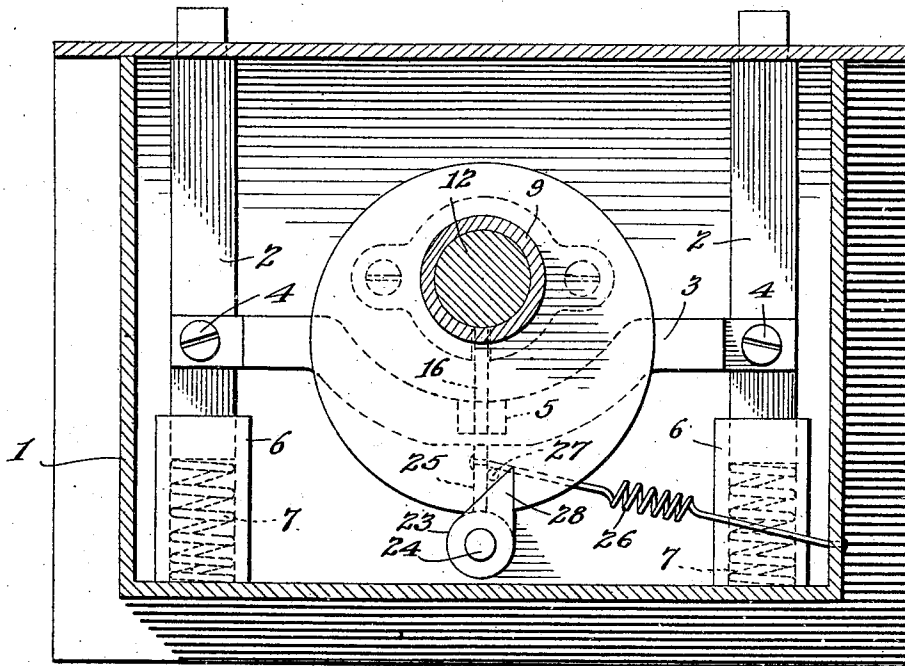
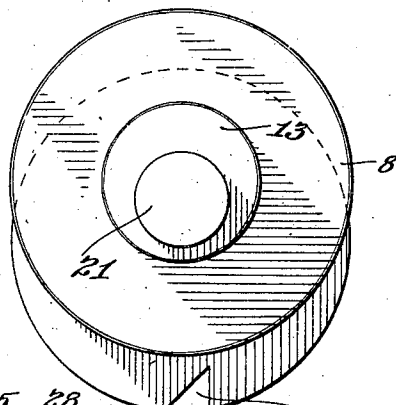


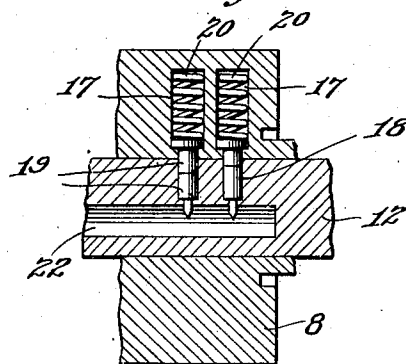
Fig. 4.



Witnesses

M. C. Lyddane
J. A. Mulhall.

Fig. 5.



John F. Beatty

Joshua R. D. Davis.

Attorney

J. F. BEATTY.

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3 SHEETS—SHEET 3.

Fig. 6.

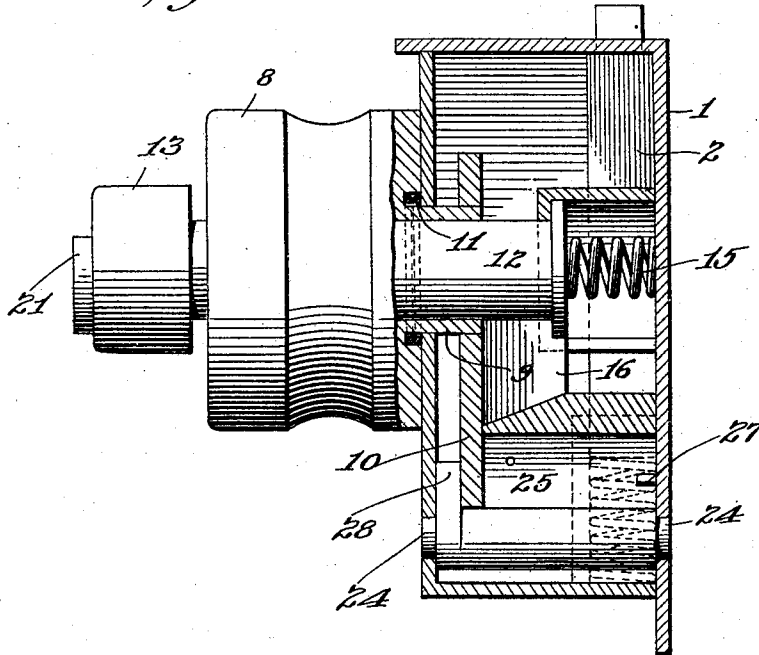


Fig. 7.

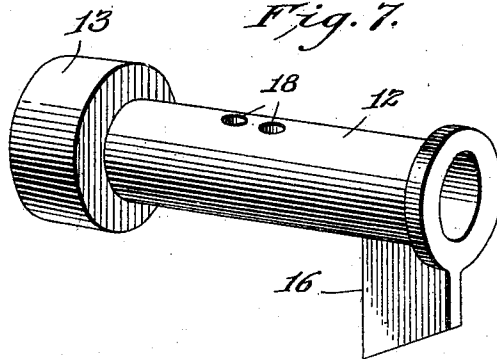
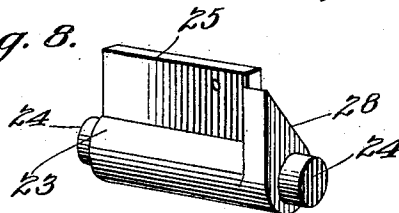


Fig. 8.



Witnesses

W. C. Lyddane
J. A. L. Mulhall

Inventor

John F. Beatty

By

Joshua R. Potts

Attorney

UNITED STATES PATENT OFFICE.

JOHN F. BEATTY, OF MORTON, PENNSYLVANIA.

LOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN F. BEATTY, a citizen of the United States, residing at Morton, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Locks, of which the following is a specification.

My invention relates to improvements in locks, more particularly designed for inside use, as for instance upon a cupboard, wardrobe, and similar doors, and which can be readily operated by any one familiar with a lock, but which will be difficult for anyone not familiar with a lock to operate.

A further object is to provide improved locking means, which render it impossible to operate the lock until the proper key is inserted.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations, and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1, is a view in longitudinal section illustrating my improvements in locking position. Fig. 2, is a similar view showing the parts in unlocked position. Fig. 3, is a view in section at right angles to Figs. 1 and 2. Figs. 4 and 5, are views of details of construction. Fig. 6, is a view in section illustrating one of the operative positions of the parts. Fig. 7, is a detail perspective view of the plunger, and Fig. 8, is a detail perspective view of the tumbler.

1 represents a lock casing in which parallel bolts 2 are mounted to slide, and are connected by a cross bar 3. This cross bar 3 is secured to the bolts 2 by means of screws 4, and is preferably curved downward as shown in Fig. 3, and notched and beveled at its center as shown at 5, for a purpose which will more fully hereinafter appear. The inner ends of the bolts 2 move in housings 6, and coiled springs 7, located in said housings, bear outwardly against the bolts and normally force them into locking position.

A knob 8 is provided with a restricted neck portion 9, mounted to turn in an opening in the casing wall, and is provided with an eccentric disk 10 on its inner end, and a

coiled spring 11 is disposed between the casing and the knob 8 to normally press the latter outward and hold the disk 10 against the inner face of the lock casing. This knob is bored throughout, and a cylindrical plunger 12 is mounted to slide in the bore of said knob, and the said plunger is provided with an enlarged head 13 on its outer end, movable in an enlarged recess or socket 14 in the knob, as clearly shown.

A coiled spring 15, is disposed between the wall of the casing, and the inner end of plunger 12, and preferably projects into a socket in the latter to normally press the plunger outward as shown in Fig. 1. This plunger 12 is provided at its inner end with a web 16 having a cam face to engage in the bevel or cam faced notch 5 of the cross bar 3, so that when the plunger 12 is forced inwardly, the cam action of the web 16 against the cross bar 3 will draw the bolts 2 inwardly to unlocked position, and when the plunger is permitted to spring outward, the springs 7 will project the bolts to locking position.

The knob 8 and the plunger 12 are provided with lateral openings or recesses 17 and 18 respectively, which, when the plunger is in its extreme outward position, and the bolts 2 in locked position, are adapted to register, and sectional pin tumblers 19 located in said recesses, are so registered and held by means of coiled springs 20, the latter in the recesses 17 of the knob. These pin tumblers 19 are adapted to be engaged by a key 21 inserted in a key-way 22 in the plunger, and this key is so constructed and shaped, that when it is inserted, it will hold the sectional pin tumblers, so that the meeting edges of their sections, will exactly register with the meeting edges of the plunger and the knob, and permit the plunger and knob free independent movement. When, however, the key is withdrawn, the springs 20 will project the pin sections across the meeting edges of the plunger and knob, and securely lock them against independent movement, and as the inward movement of the disk 10 on the knob 8 is limited, as will more fully hereinafter appear, it will be seen that the bolts 2 will be securely locked.

A tumbler 23 is mounted in the casing, and provided with pintles 24 at its ends, pivotally supporting the tumbler, and a web

25 on the tumbler is connected by a spring 26 with the casing 1, so as to hold said webbing against a pin stop 27 in the casing, and properly position a latch dog 28, which latter is adapted to enter a notch 29 in the disk 10, and when in said notch, the locking pin sections will be registered so as to enable the device to be locked.

When the key is in the lock and the knob is turned, it will be observed that the removal of the key cannot lock the parts, and hence for the ordinary use, the parts would be so positioned. When it is desired to securely lock the parts, the knob 8 is moved inward to the position shown in Fig. 6, this inward movement being limited by the cross bar 3, and the webbing 25. The knob is then turned to turn the disk 10 until the dog 28 registers with the notch 29, when the knob will spring out. When in this position, the pin tumbler sections 19 are in register, and by the removal of the key 21, the parts can be securely locked, and can only be unlocked by the use of the proper key, and by some one familiar with the operation of the locking mechanism.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a lock, the combination with a sliding bolt, of a plunger, said plunger and said bolt so constructed that the inward movement of the plunger will draw back the bolt, a knob having rotary mounting on said plunger, and pin tumblers in said knob and plunger securely locking them together.

2. In a lock, the combination with parallel locking bolts, a cross bar connecting the bolts, an outwardly spring-pressed plunger, and a web on said plunger having a cam face in engagement with a cam face on said cross bar, a rotary knob on said plunger, and pin tumblers locking said knob and plunger together.

3. In a lock, the combination with locking bolts, springs normally pressing said bolts outwardly, a cross bar connecting said bolts, and having a cam face, a plunger, a cam shaped web on said plunger engaging the cam face of the cross bar, a rotary and longitudinally movable knob on said plunger, and means for locking said knob and plunger against independent movement.

4. In a lock, the combination with locking bolts, of a longitudinally movable plunger constructed to unlock said bolts, a knob

having rotary mounting on said plunger, said knob and plunger having registering openings, sectional pin tumblers in said openings, and a key in said plunger constructed to hold said sectional pin tumblers, so as to permit independent movement of the plunger and the knob.

5. In a lock, the combination with a longitudinally movable bolt-moving plunger, of a knob having rotary mounting on said plunger, a pivoted spring held tumbler, a dog on said tumbler, a disk on said knob having a notch to receive said dog, said knob and plunger having openings normally in register when the said dog is in the notch of the disk, sectional pin tumblers in said openings or recesses, and a key in said plunger constructed to position the sectional pin tumblers, so as to permit independent movement of the plunger and the knob.

6. In a lock, the combination with a lock casing, of a knob, a restricted neck portion on the knob having rotary mounting in the lock casing, a disk on the neck portion and located within the lock casing, a spring between said knob and the lock casing, a tumbler within the lock casing, a web on said tumbler, a spring pressing said web in one direction, a stop in the casing limiting the movement of the said web in that direction, a dog on said tumbler adapted to enter a notch in said disk, said knob and the plunger having openings normally in register when said dog is in the notch of the disk, sectional pin tumblers in said opening and a removable key in said plunger adapted to hold said pin tumblers, so as to permit independent movement of the knob and the plunger.

7. In a lock, the combination with a sliding bolt, of a plunger constructed to move said bolt, a knob having rotary and longitudinal pin tumblers, so as to permit independent knob and said plunger having openings adapted to register, pin tumblers in said openings, and means for indicating when the openings in said knob and plunger are in register.

8. In a lock, the combination with a sliding bolt, of a plunger constructed to move said bolt, a knob having rotary and longitudinal mounting on said plunger, said knob and said plunger having openings adapted to register, pin tumblers in said openings, a notched disk on said knob, and a dog adapted to enter said notch when the openings in said knob and plunger are in register.

9. In a lock, the combination with a casing, a sliding bolt in the casing, a plunger at right angles to said bolt and constructed to move the same, a rotary knob on said plunger, said knob and said plunger having normally registering openings, pin tumblers

in said openings, a notched disk connected with said knob and located within the casing, and a spring pressed dog in said casing adapted to enter the notch in the disk when
5 the openings in said knob and plunger are in register.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

JOHN F. BEATTY.

Witnesses:

J. A. L. MULHALL,
R. H. KRENKEL.