

No. 827,178.

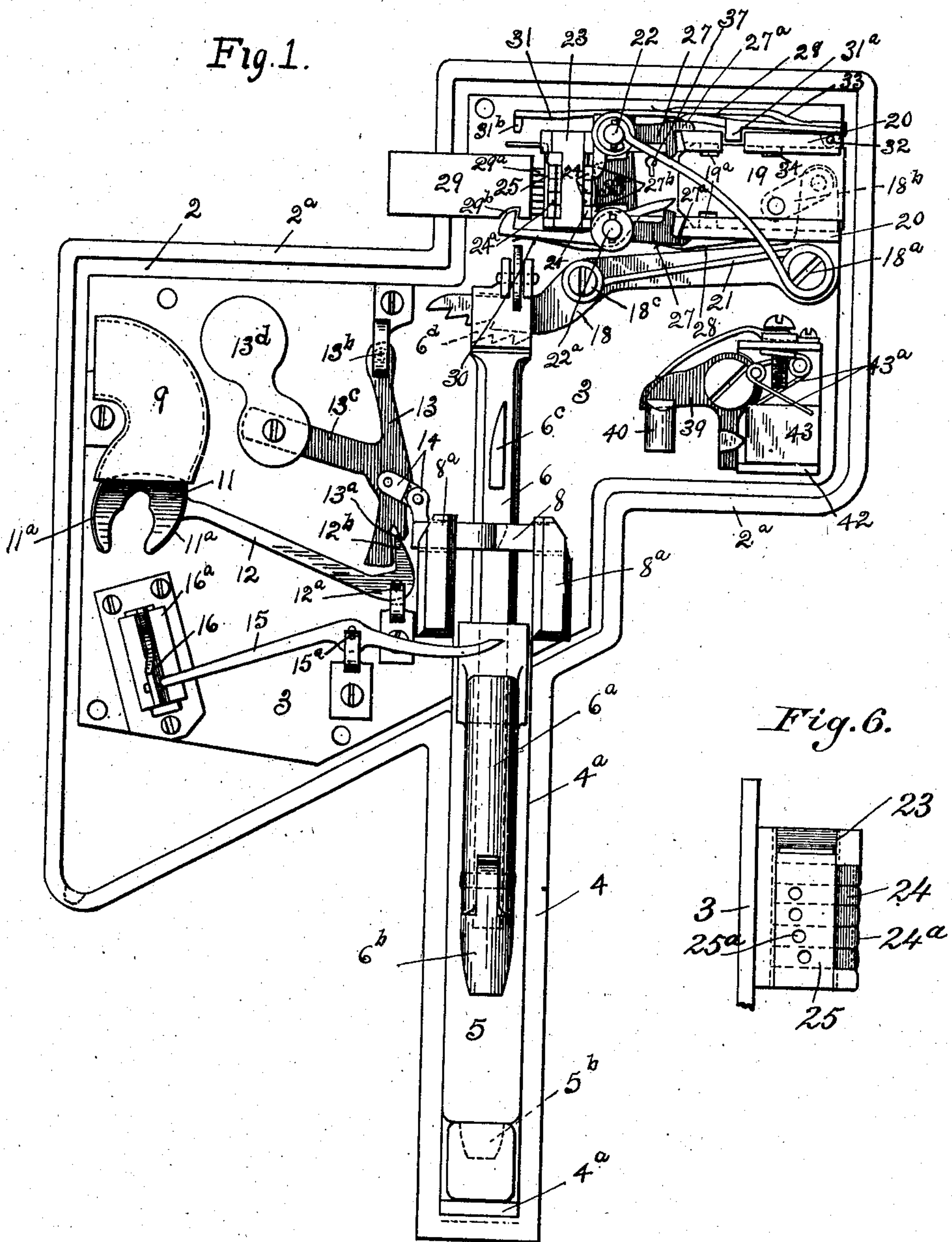
PATENTED JULY 31, 1906.

T. E. POLLMANN.

LOCK.

APPLICATION FILED APR. 17, 1905.

3 SHEETS—SHEET 1.



WITNESSES:

D. C. Walter

C. A. D. Young

INVENTOR.

T. E. Pollmann,
By Owen & Owen
His attorneys.

No. 827,178.

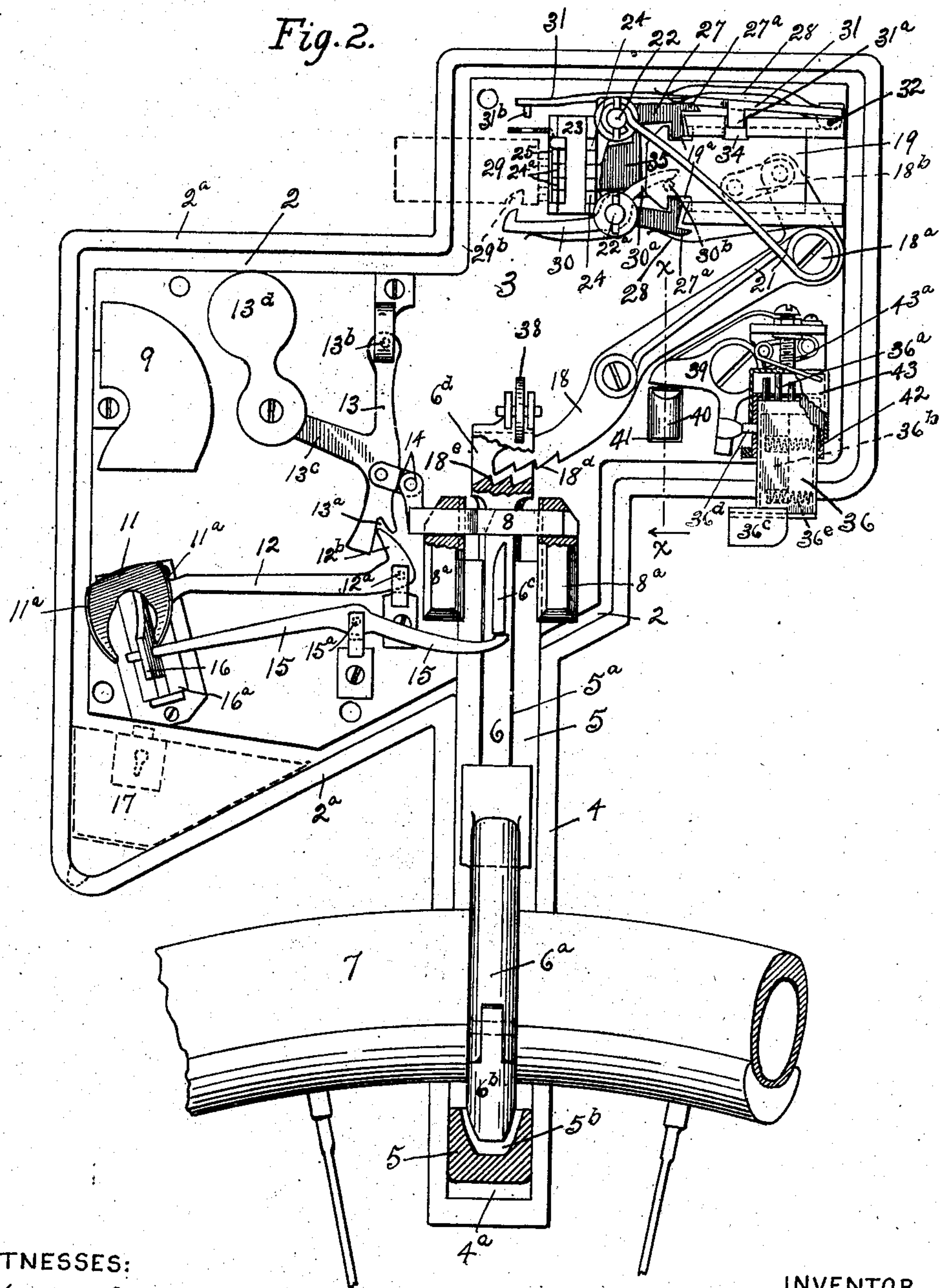
PATENTED JULY 31, 1906.

T. E. POLLMANN.

LOCK.

APPLICATION FILED APR. 17, 1905.

3 SHEETS—SHEET 2.



WITNESSES:

D. C. Walter
C. A. Young.

INVENTOR.

Jonas E. Pollmann,
By Owen & Owen
His attorneys.

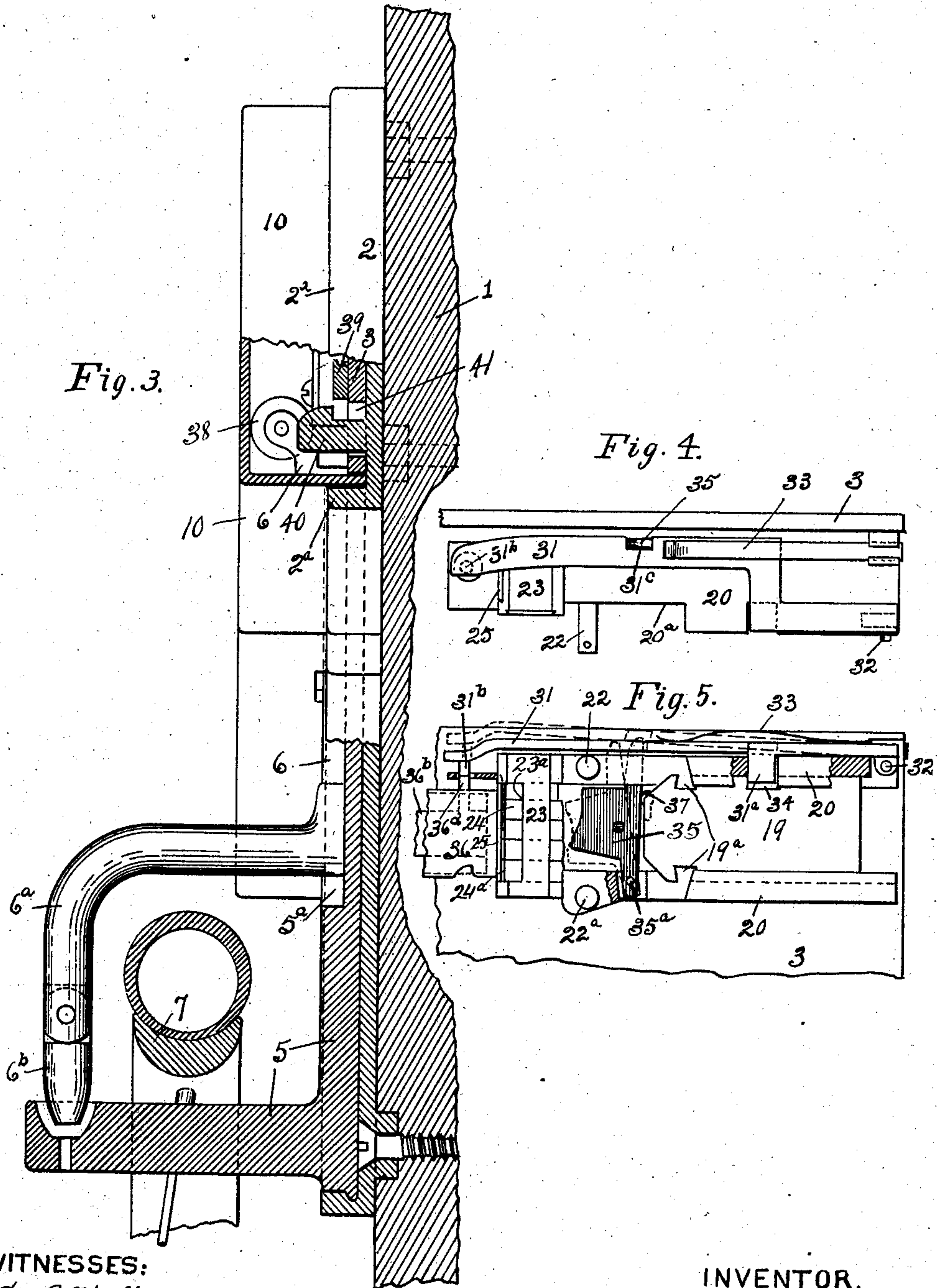
No. 827,178.

PATENTED JULY 31, 1906.

T. E. POLLMANN.
LOCK.

APPLICATION FILED APR. 17, 1905.

3 SHEETS--SHEET 3.



WITNESSES:
D. C. Walter
C. A. D. Young.

INVENTOR.
T. E. Pollmann,
By Owen & Owen
His attorneys.

UNITED STATES PATENT OFFICE.

TONIUS E. POLLMANN, OF BANT BY WILHELMSHAVEN, GERMANY.

LOCK.

No. 827,178.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed April 17, 1905. Serial No. 255,984.

To all whom it may concern:

Be it known that I, TONIUS E. POLLMANN, a citizen of Germany, and a resident of Bant by Wilhelmshaven, Germany, have invented certain new and useful Improvements in 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to coin-controlled locks, and is shown in the drawings as being more especially adapted for locking a bicycle, vehicle, or the like to a wall, building, or post, but may also be adapted to nearly any use to which a bolt-lock might be applied.

The object of my invention is the provision of a durable and efficient lock of the stationary class the arrangement, operation, and construction of the parts of which are fully described in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a front elevation of the invention with the front casing removed and showing the operative parts in normal or unlocked position. Fig. 2 is a similar view with the operative parts shown in locked position and portions thereof in section. In the lower right-hand corner of this figure the mechanism employed for locking the operative parts to the backing-plate is shown partly broken away, with the key in position therein and the parts in unlocked position. Fig. 3 is a side elevation of my invention set up, with parts shown in section. Figs. 4 and 5 are top and front detail views of a portion of the locking mechanism designed to prevent tampering with the lock by unauthorized persons, and Fig. 6 is an outer side elevation of the casing and plates of the lock with which the releasing-key coöperates.

Like numerals of reference indicate like parts in all the figures of the drawings.

Referring to the drawings, 1 represents a wall, post, or other stationary object, and 2 the backing piece or plate of my invention, which is bolted or otherwise rigidly secured to said wall or post and has its perimeter formed with an outwardly-projecting flange 2^a and shaped, as shown in the drawings, to receive the operative parts of the invention. Removably secured to the outer face of the

backing-plate 2, by means hereinafter described, is the plate 3, to which the operative parts of my invention are attached, as shown in Figs. 1 and 2, and thus made removable with said plate from the backing-plate.

Projecting downwardly from the lower edge of the backing-plate 2 in a plane therewith is the arm 4, which has its lower and side edges formed with a continuation of the flange 2^a of said plate. Snugly mounted within the groove or channel 4^a in the arm 4 is the L-shaped arm 5, which has its foot or horizontal portion projecting at right angles from said arm and its upper end rigidly secured in any suitable manner to the face of the plate 3 at its lower edge. Beginning at the upper end of the L member 5, it is formed a portion of its length with a dovetailed groove 5^a, in which is reciprocally mounted the plunger 6 of the lock, which terminates at its lower end in the L-shaped finger 6^a, the free end of which is adapted to register with a depression 5^b in the horizontal portion of the member 5 and to seat therein when the plunger and finger are pressed down, as shown in Figs. 2 and 3. At the free end of the finger 6^a is pivoted a point 6^b, which is adapted to be swung outwardly to permit the insertion within the space bounded by the L member 5 and finger 6^a of a tire or other object 7 to be locked, which is of greater thickness than the space between the foot of the member 5 and point 6^b when the plunger and finger are raised or in unlocked position.

The lowering of the plunger 6 is normally prevented by reason of a lug 6^c on its forward face engaging the upper edge of the transversely-disposed member 8, which is mounted to have a longitudinal reciprocatory movement within the two bosses 8^a, one of which is secured to the plate 3 at each side of the upper end of the L member 5. Provided on the inner surface of the member 8 is a laterally-disposed notch (shown by dotted lines in Figs. 1 and 2) which is normally out of register with the path of movement of the lug 6^c, but is adapted to be drawn into register therewith by a slight longitudinal movement being imparted to the member 8, which draws the notch to the position shown in Fig. 2 and allows the lug 6^c to pass below the same as the plunger 6 and connected finger are forced down to locked position by external pressure. The left-hand side of the notch and the contiguous upper edge of the lug 6^c

are correspondingly beveled to permit said lug in its raising movement to force the member 8 to the left, and thus allow the lug to pass through the notch.

To effect a proper movement of the member 8 from without the casing of my device, as it may be desired to lower the plunger 6 and attached finger to lock a wheel or other object to the foot of the L member 5, I provide a coin-controlled mechanism, as shown at the left of the plunger. A coin of the proper weight and size is deposited in the coin-chute 9 through a slot (not shown) provided in the side of the cover or outer casing 10, which is bolted or otherwise secured to the plate 3 over the operative parts of the mechanism and has its rim seating snugly within the flange 2^a of the backing-plate 2. As the coin leaves the lower end of the chute 9 it drops into a coin-receptacle 11, which is mounted at the end of the long arm of the lever 12 and has its lower portion tilted slightly outwardly, so that its back is not in exact parallelism with the plate 3, and its lateral or side flanges 11^a cut away at top and bottom, the upper cut portion being of suitable width to allow the coin to pass therethrough, while the lower portion is more restricted, as shown. The lever 12 is pivoted at 12^a to the plate 3 and terminates at its inner end in the short arm 12^b, which is adapted to project within a notch 13^a in the lower end of the oscillatory member 13, which is pivoted at 13^b to the plate 3. An arm 13^c projects laterally from the member 13 toward the chute 9 and has a weight 13^d mounted at its outer end to act as a counterbalance for the lever 12 and normally retain the coin-receptacle elevated directly under and in contact with the lower end of the chute 9. The member 13 has connection with the contiguous end of the movable locking member 8 through the medium of the pivotally-connected links 14, thus causing an oscillation of the member 13 to impart a reciprocatory movement to the member 8. It will thus be seen that as a coin drops into the receptacle 11 from the chute 9 its weight will overbalance the weight 13^d and cause the outer end of the lever 12 to be lowered, thereby imparting an outward oscillation to the member 13 and a movement of the locking member 8 sufficient to draw the notch therein in alinement with the lug 6^c. The parts remain in this position until the lower end of the lug 6^c on the descending movement of the plunger 6 comes in contact with and causes an oscillation of the lever 15, which is pivoted at 15^a to the plate 3 and has its opposite end in loose engagement with the coin-extracting slide 16. The coin-extractor 16 is mounted within and has its movement guided by the guide member 16^a, which is secured to the plate 3 and is disposed in the arc of movement of the coin-receptacle 11. The ex-

tractor has its outer edge beveled or tapered toward its upper end to adapt said upper end to extend under the connected portion of the receptacle 11 and its gradually-thickening portion to project through an opening or cut-away portion in the lower part of the receptacle in an intersecting plane therewith, as shown in Fig. 2, thus causing the lower edge of the coin to be forced outwardly from engagement with the side flanges 11^a of the receptacle and permitting it to slide along the extractor 16 and drop within the removable coin-receiving box or receptacle 17, which is shown by dotted lines in Fig. 2. As soon as the coin is released from the receptacle 11 the lever 12 and members 8 and 13 are actuated to return to their normal positions by the counterbalance 13^d.

The mechanism employed for locking the plunger 6 and attached finger in lowered or locked position comprises the bell-crank lever or lifting-finger 18, which is pivoted at 18^a to the plate 3 and has the end of its long arm loosely projecting within an opening 6^d, provided transversely in the upper end of the plunger 6 and the end of its short arm connected to the horizontally-movable block 19 through the medium of the pivotal link 18^b. The block 19 is mounted for movement in the horizontal leaders or guides 20, which project from the face of the plate 3, and is spaced a suitable distance from said plate to enable the short arm of the lever 18 to project between their contiguous faces, a slot (not shown) being provided in the outer end of the lower guide or leader 20 for that purpose. The lever or lifting-finger 18, block 19, and plunger 6 are actuated to normally remain or move to the positions shown in Fig. 1 by means of the spring 21, which is centrally coiled about the pivot of said lever or in substantial axial alinement therewith and has its ends crossed and one fixed at 18^c to the long lever-arm and the other fixed to a stud 22, projecting from the forward edge of the upper guide or leader 20.

Secured to the plate 3 at the left or inner end of the leaders 20, as shown in Figs. 1, 2, 4, 5, and 6, is a rectangular casing or frame 23, which has the side thereof facing the leaders left open. Mounted for horizontal reciprocal movement within this frame are a plurality of superimposed plates 24, which are capable of independent movement toward and away from the inner ends of said leaders. These plates have their inward movements limited by the ears 24^a thereon acting as stops which coact with the contiguous edge 23^a of the front side of the frame 23, as shown in Figs. 2 and 5.

The ends of the leaders or guides 20 adjacent to the casing or frame 23 are partially cut away, as shown at 20^a in Fig. 4, and projecting from these cut-away portions are the upper and lower studs 22 and 22^a, re-

spectively. Mounted on each of these studs in longitudinal alinement with the block 19 is a tumbler 27, which has projections formed thereon in position to be thrown by the action of a spring 28 into engagement with a notch 19^a, provided near the inner end of the block 19 in its upper or lower edges, as the case may be, when said block is moved to the left a predetermined distance by the lowering movement of the plunger 6. The ends of the tumblers 27 are caused to be oscillated out of the path of the block 19 on the inward movement thereof by reason of the beveled corners of said block coming in contact with the projections on the tumblers. When the block 19 is in the position shown in Fig. 1, the tumblers 27 each have their inward movement limited by a lip 27^a thereon engaging the contiguous portion of the leaders or guides 20. At the end of each tumbler adjacent to the casing or frame 23 is formed a finger 27^b, which projects in the path of movement of and abuts laterally against the inner edges of a portion of the plates 24, as the combination of the lock may require, thus causing an inward movement of the plates to impart an outward oscillatory movement to the tumblers in opposition to the springs 28 and to disengage the projections thereon from the notches in the block 19, which unlocks and permits the plunger 6, lifting-finger 18, and block 19, actuated by the spring 21, to return to their normal or unlocked positions, as shown in Fig. 1.

The proper combination of the plates 24 are moved from without the inclosing casing or cover 10 by means of a flat rectangular key 29, which has its inner end formed with a series of arbitrarily-arranged pins or projections 29^a of varying lengths, which are adapted to pass through alining apertures 25^a in the vertical plate 25 and have contact with the outer ends of the plates 24, coacting with the tumblers 27, or seat within sockets of varying depths therein, whereby an inward pressing of the key imparts the desired movement to the proper plates 24. For the purpose hereinafter described the key 29 is prevented from withdrawal from the lock except when the plunger is lowered and the several parts in locked position by reason of a spring-pressed dog 30 being mounted on the stud 22^a and having its hooked end normally retained in engagement with a notch 29^b in the lower edge of said key. This dog is caused to be released from engagement with the key 29 on the inward or locking movement of the block by reason of the rearwardly-projecting finger 30^a thereon being engaged by a pin 30^b or cam-surface formed on the inner side of said block, as shown in Fig. 2.

In order to provide a safeguard against the lock being tampered with or unlocked by persons not holding a key therefor, I pivot an

auxiliary tumbler 31 to the upper guide or leader 20 at 32 and form a projection 31^a thereon, adapted to project through an opening or slot in the leader and be thrown by the action of a spring 33 into engagement with a notch 34 in the upper edge of the block 19 when said block is in locked position, as shown in Figs. 2 and 5. The tumbler 31 has its free end terminating slightly to the left of the casing or frame 23, in which the plates 24 are mounted, and formed with a downwardly-projecting pin 31^b and is provided intermediate of said end and the projection 31^a with a slot or notch 31^c. The tumbler 31 is normally held elevated with the projection 31^a thereon out of engagement with the notch 34 in the block 19 by means of a horizontally-oscillatory member 35, which is pivoted at 35^a to the lower guide or leader 20 and adapted to have its enlarged face in contact with the inner ends of the plates 24 not included in the locking combination or having contact with the tumblers 27. When the member 35 is in normal position, as shown in Figs. 1 and 2 and by dotted lines in Fig. 5, its upper reduced end is in engagement with the under surface of the tumbler 31 and retains it in elevated position. Should any of the plates 24 not engaging the tumblers 27 be pushed inwardly by a person tampering with the lock, the member 35 would be moved on its pivot to the position shown in Fig. 5, with its upper reduced end in register with the slot or notch 31^c in the tumbler 31, thus permitting said tumbler to be moved by the action of the spring 33 until its projection 31^a engages the notch 34 in the block 19. When the auxiliary tumbler 31 has been thus thrown into engagement with the block 19, the parts may be unlocked by a special key 36, provided for that purpose, or the plate 3 and attached parts may be removed from engagement with the backing-plate 2, as hereinafter described, to permit an ordinary key to be inserted in the keyhole 37 through the plate 3 and turned to throw the member 35 back to its normal position, and thus elevate the tumbler 31 out of engagement with the block 19, after which the tumblers 27 may be released therefrom in the usual manner.

The key 36 is shown in Figs. 2 and 5 and comprises a hollow rectangular member similar in shape and size to the key 29 and formed at its inner end with pins 36^a, similar to those of said key 29. Mounted to have lateral movement within the hollow portion of the key is a bar 36^b, which has its outer end made rigid to a grip 36^c, adapted to be moved laterally of the end of the key and its inner end formed with a laterally-projecting pin 36^d, which is normally retained within the body of the key by one or more contraction-springs 36^e, acting on the bar 36^b.

One of the purposes of the key 26 is to effect a release of the auxiliary tumbler 31 from

engagement with the block 19, which cannot be accomplished by the key 29. When used in this connection, the key 36 is inserted in the lock with the pins 36^a thereon in contact
 5 with the same plates 24 as are operated on by the pins of the key 29 and the pin 36^d, carried by the movable bar 36^b, projecting upwardly in position to have contact with the pin 31^b on the tumbler 31. The bar 36^b in the key is
 10 now moved upwardly to cause a shooting or outward movement of the pin 36^d sufficient to engage the pin 31^b and raise the tumbler 31 from engagement with the block 19. As the tumbler 31 is raised the key is pushed in
 15 to effect a release of the tumblers 27, thus unlocking the block 19 and permitting it to return to normal position. When the pin 36^d is in extended position, said pin, the bar 36^b, and grip 36^c assume the positions rela-
 20 tive to the key-body 36. (Shown in the lower right-hand corner of Fig. 2.)

In order to prevent additional strain on the block 19 and tumblers 27, due to an upward pressure on the plunger 6 and attached
 25 finger when the parts are in locked position, as shown in Fig. 2, I form a series of teeth 18^d at the end of the long arm of the lifting-finger 18, which are engaged by corresponding teeth 18^e on the lower surface of the opening 6^d as
 30 the plunger 6 is raised independently of the lifting-finger 18.

An antifriction-roller 38 for contact with the inner surface of the casing or cover 10 as the plunger is raised or lowered is mounted in
 35 suitable bearings at the upper end of the plunger 6 and is adapted to prevent a binding of said plunger within the dovetailed groove in the guide member 5 due to lateral pressure being exerted on the finger 6^a as it is
 40 forced down.

At the lower right-hand corner of the plate 3 is secured a device for locking the plate 3 to the backing-plate 2. The locking elements of this device comprise a spring-pressed
 45 bell-crank lever 39 and notched boss 40, which latter projects from the face of the backing-plate 2 through an aperture 41 in the plate 3 and is engaged by the horizontal arm of said lever 39, as shown in Fig. 3. To
 50 effect a release of the lever 39 from the boss 40, I insert the end of the key 36 through a slot in the under side of the cover 10 and into the box 42, which is mounted on the plate 3, with the pins 36^a thereon projecting through
 55 registering apertures in the upper end of said box and the longer ones in engagement with the end of a second box 43, that is mounted over and adapted to have a vertically-reciprocatory movement on said first box 42, as
 60 shown in Fig. 2. As the key is inserted the box 43 is raised against the tension of the springs 43^a until the pin 36^d in the key comes in alinement with an aperture in the side of the inner box 42 adjacent to the vertical
 65 arm of the lever 39, the said aperture being

uncovered by the raising of the box 43. The release of the catch 39 from the boss 40 may now be effected by moving the bar 36^b in the key to the left, so that the pin 36^d passes through the aperture in the box 42 and en-
 70 gages and causes the catch to be oscillated out of engagement with the boss, as shown in Fig. 2.

The operation of my invention is as follows: The normal position of the several
 75 parts of the mechanism is as shown in Fig. 1, the plunger 6 and attached finger being elevated or in unlocked position and the key 29 locked against withdrawal from the lock by reason of the dog 30 engaging the notch
 80 29^b in said key. To effect a lowering or locking movement of the plunger 6 to enable an object to be locked to the foot of the member 5, a coin of the proper weight is dropped into the chute 9. As the coin falls from the
 85 chute into the receptacle 11 its weight overbalances that of the weight 13^d on the member 13, thus causing a lowering of the long arm of the lever 12 and imparting oscillation to the member 13 and a longitudinal move-
 90 ment to the member 8 sufficient to move the notch therein in register with the lug 6^c on the plunger 6. The plunger may now be lowered to locked position. Near the limit of lower movement of the plunger the lug 6^c
 95 thereon comes in contact with the lever 15 and causes an upward movement of the coin-extracting slide 16, which engages and emits the coin from the receptacle 11, thus freeing
 100 it of its load and permitting it to be returned to its normal elevated position by the action of the counterweight 13^d. As the plunger 6 is lowered the lifting-finger 18 is drawn down against the tension of the spring 21,
 105 thus causing the block 19 to move to the left and be engaged and locked by the tumblers 27. As the block 19 is engaged by the tumblers 27 the dog 30 is freed from engagement with the key 29, thereby permitting the re-
 110 moval of the latter from the lock by the person who deposited the coin, which he carries until he wishes to release the locked article from the apparatus. The release is accomplished by inserting the key within the re-
 115 ceiving-slot therefor with its pins 29^a projecting within the apertures in the plate 25 in contact with the outer ends of the proper plates 24 contained in the lock combination. As the key is pressed inwardly the plates 24
 120 are likewise pressed against and cause a release of the tumblers 27 from engagement with the block 19, thus permitting a return of the block 19, lever 18, and plunger 6 to their normal unlocked positions, due to the
 125 action of the spring 21 on said lever. When it is desired to remove the plate 3 and attached parts from the backing-plate 2, the key 36, which is left in charge of some one near where the apparatus is mounted, is in-
 130 serted within the box 42 and manipulated, as

above described, to release the catch 39 from engagement with the notch in the boss 40, after which the operative parts may be removed.

5 It is obvious that such changes in the form, proportion, and minor details of arrangement and construction of the parts as fairly fall within the scope of my invention may be made without departing from the spirit or sacrificing any of the advantages thereof.

While I have shown and described both the lock and the coin-controlled mechanism by which the lock in its present arrangement is made operative, I do not wish to confine myself to the use of this mechanism in connection with my lock, as other means for releasing the plunger 6 might be employed.

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

1. The combination in a lock, of a bolt or plunger having an opening in a portion thereof, said opening having one side provided with teeth, a lever having one end in loose engagement with the opening in the bolt or plunger and provided with teeth for engaging the teeth in said opening when an inward pressure is applied to the bolt or plunger, and mechanism for locking the lever and bolt or plunger in one position of movement.

2. The combination in a lock, of a plunger or bolt, a separate reciprocatory element, a lever having one arm in connection with the plunger or bolt and its other arm connected to said element whereby they are caused to have dependent movement, means for retaining said parts in locked position, means for releasing said means to permit an unlocking movement of said parts and means for causing an automatic return of the plunger or bolt and locking parts to normal or unlocked position when released.

3. In a lock, a bolt or plunger, a lever having one arm in connection with said bolt or plunger, a sliding member having connection with the other arm of said lever, one or more tumblers for engaging and retaining said member in one position of movement, means coacting with said tumblers adapted when moved to cause their release from said member to permit a movement thereof and means for causing an automatic return of the parts to normal or unlocked position when said member is released by the tumblers.

4. In a lock, a bolt or plunger, a movable block, means for imparting movement from one to the other of said elements, one or more tumblers for engaging and retaining said block in one position of movement, a plurality of movable members mounted to have contact with said tumblers and adapted when moved to cause a release of the tumblers from engagement with said block.

5. In a lock, a bolt or plunger, a movable

block, means for imparting movement from one to the other of said elements, one or more tumblers for engaging and retaining said block in one position of movement, means for releasing said tumblers from said engagement, and means independent of said releasing means for effecting a return of said block and connected parts to normal or unlocked position.

6. In a lock, an L member, a plunger guided by said member and having a finger for coacting with the foot of said member when said plunger is in extended position, a sliding element, a lever connecting said plunger and element whereby a movement of one is imparted to the other, mechanism for locking said element against movement when the plunger is extended, and means for causing a retraction of the plunger when said element is released.

7. In a lock, the combination with a reciprocatory element, of a series of tumblers for engaging and retaining said element in one position of movement, a plurality of plates movably mounted adjacent to said tumblers with a portion in contact therewith, means for imparting movement to said plates to cause a release of the tumblers from said element to permit a movement thereof.

8. In a lock, the combination with a movable element, of a series of tumblers mounted in position to have engagement with and retain said element in one position of movement, a series of movable members mounted adjacent to said tumblers with a portion in engagement therewith, a key for imparting movement to said members to cause a movement of said tumblers to release said element, and means movable by a movement of said key to prevent a withdrawal thereof except when said element is in locked position.

9. In a lock, the combination with a movable member, a bolt, and means for connecting the bolt and movable member, of mechanism for locking said member in one position of its movement, a key for operating such mechanism, and an oscillatory element normally in engagement with said key to prevent its withdrawal and movable by said member to release the key when said member is in locked position, said element having a fixed pivot.

10. In a lock, the combination with a movable locking member, of one or more tumblers for locking said member in one position of movement, a plurality of movable plates, a portion of which have engagement with and are adapted when moved to cause a release of the tumblers from said member, an auxiliary tumbler mounted to have engagement with said member, and a movable element normally positioned to retain said auxiliary tumbler out of engagement with said member and movable by a movement of the

plates not engaged by said first-mentioned tumblers to permit the auxiliary plunger to engage said member.

11. In a lock, a reciprocatory plunger having a lug thereon and an L-finger projecting laterally therefrom adapted to coact with a fixed object when the plunger is lowered, a member disposed in the path of said lug and provided with a notch normally out of register with said lug, means for causing a movement of said member adapted to place the notch therein in registration with the lug to permit a lowering of the plunger, means for effecting a return of the plunger to normal position, and mechanism for locking said plunger and latter means in one position of their movement.

12. In combination, a bolt member having an opening in its inner end formed with internal teeth, a lever having one end loosely inserted in said opening whereby an oscillation thereof imparts movement to the bolt, said lever being provided with teeth to coact with the teeth on the bolt when an inward pressure is exerted on the bolt, means for normally retaining said lever in one position, a movable element having connection with the other arm of the lever, and means for locking said element in one position of movement.

13. In combination, a bolt or plunger, a member having its plane of movement inter-

secting that of the bolt or plunger, a bell-crank lever connecting said bolt or plunger and said member for causing them to move in unison, means for locking the movable member to retain the bolt or plunger in extended position, and mechanism for locking the bolt or plunger in inclosed or unlocked position.

14. In a lock, a backing member, a plate removably secured to said backing member and having a downwardly and outwardly disposed projection extending from one side thereof, a plunger guided in its movement by said projection and having a finger projecting therefrom adapted to coact with the outwardly-disposed portion of the projection, a movable block, means connecting said plunger and block for imparting a movement from one to the other, one or more tumblers for engaging and retaining said block in one position of movement, means for causing a release of said tumblers, and means for normally retaining the plunger and block in unlocked positions.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

TONIUS E. POLLMANN.

Witnesses:

A. WIESS,
JAS. SIER.