

No. 620,361.

Patented Feb. 28, 1899.

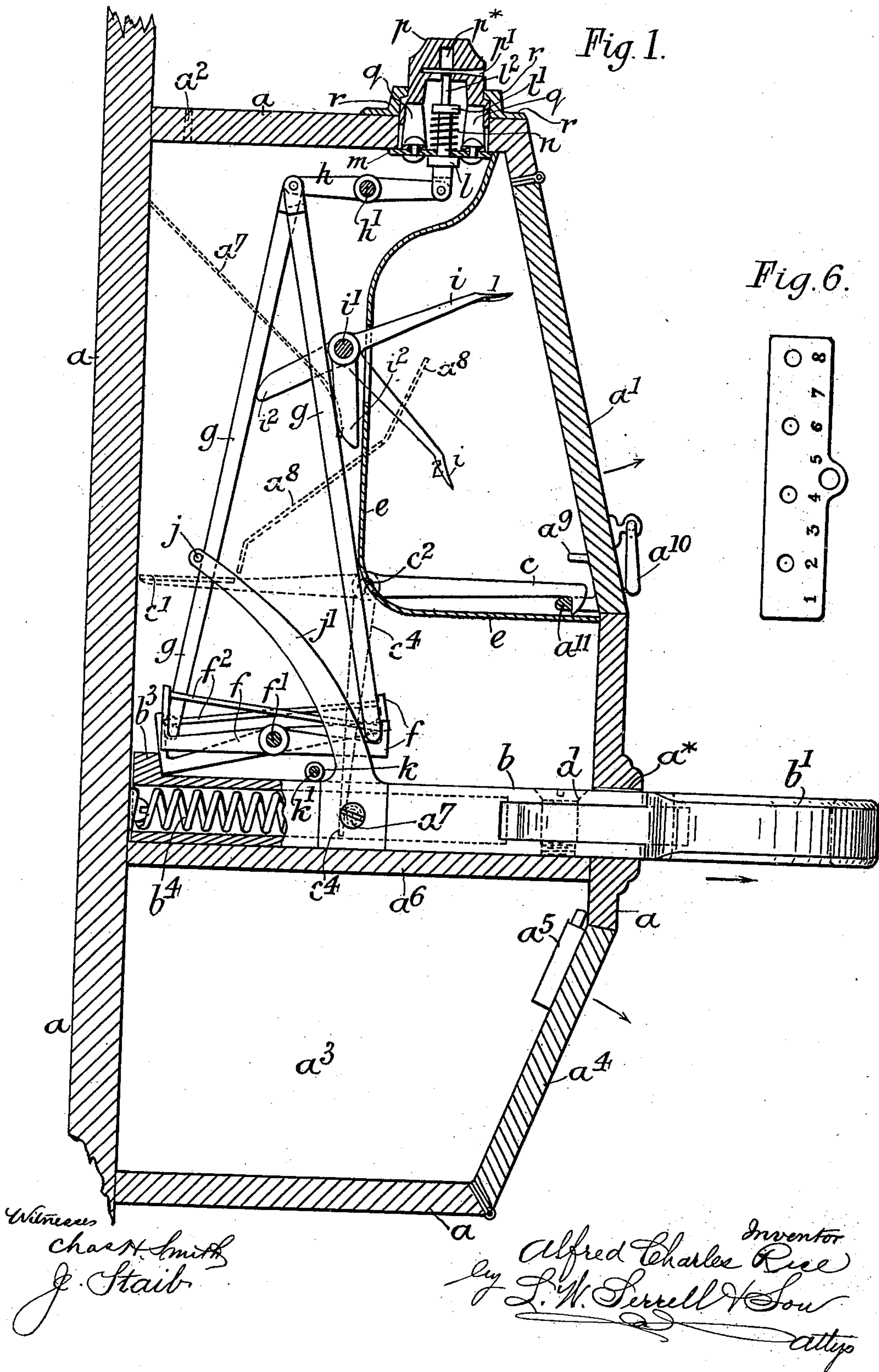
A. C. RICE.

COIN FREED HOLDER OR STAND FOR CYCLES.

(Application filed Mar. 16, 1898.)

(No Model.)

3 Sheets—Sheet 1.



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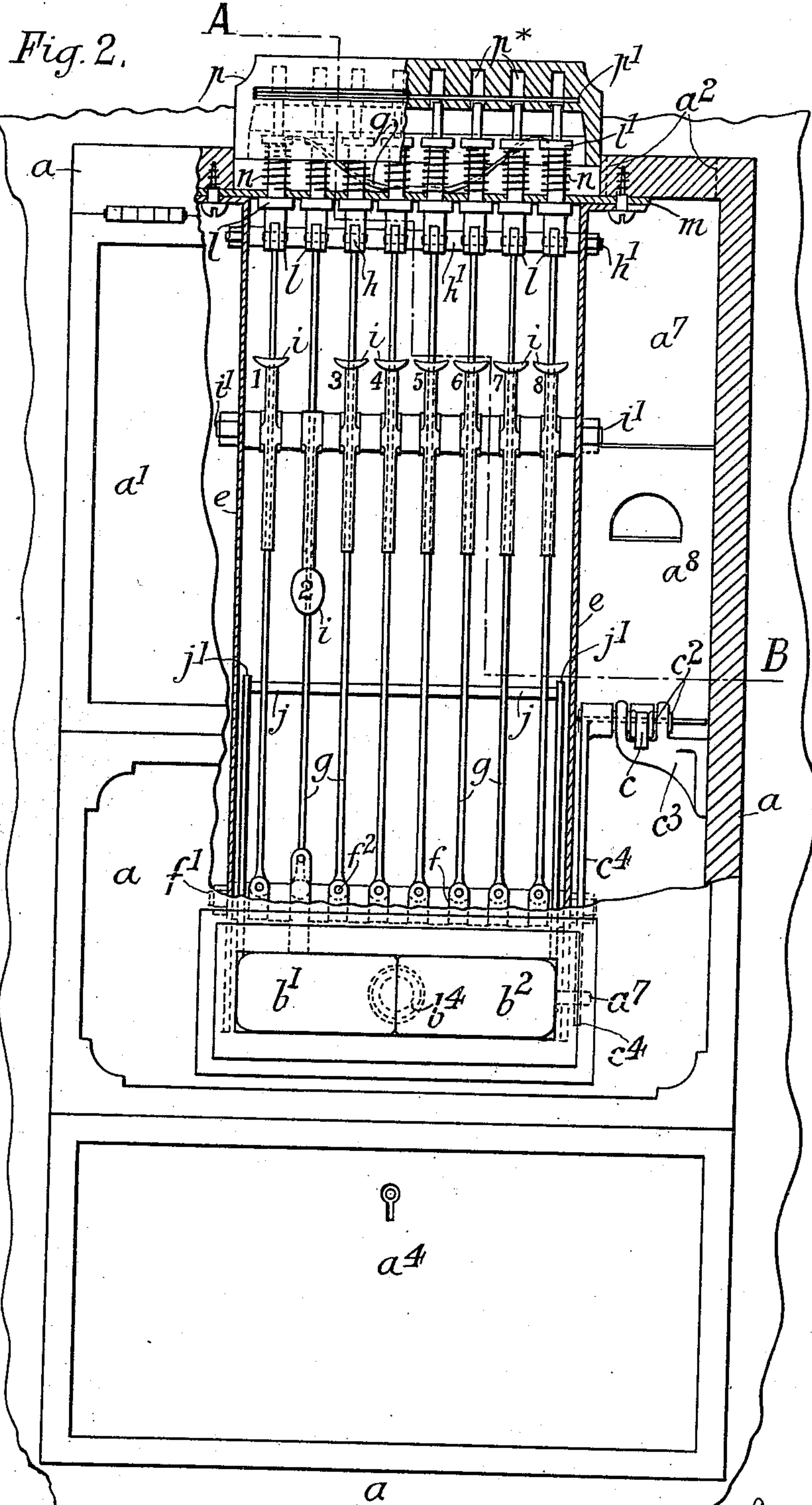
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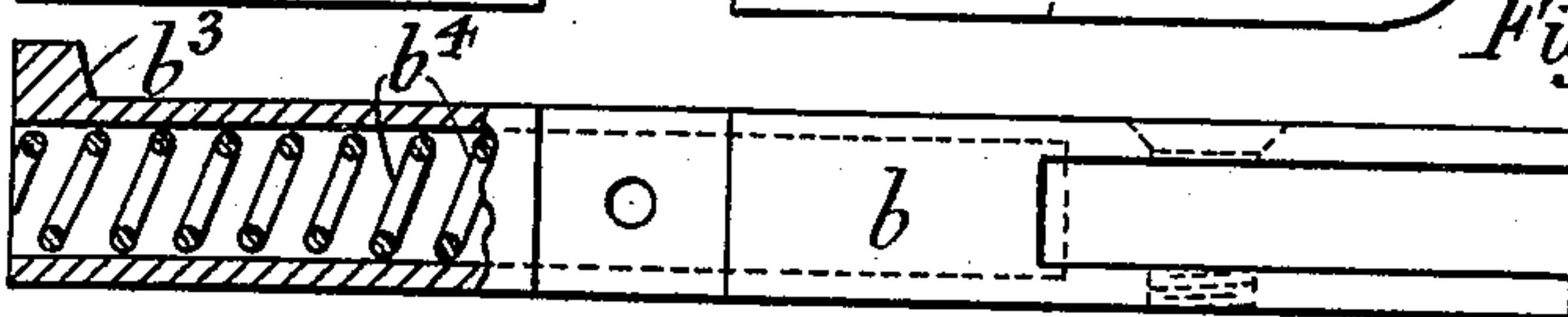
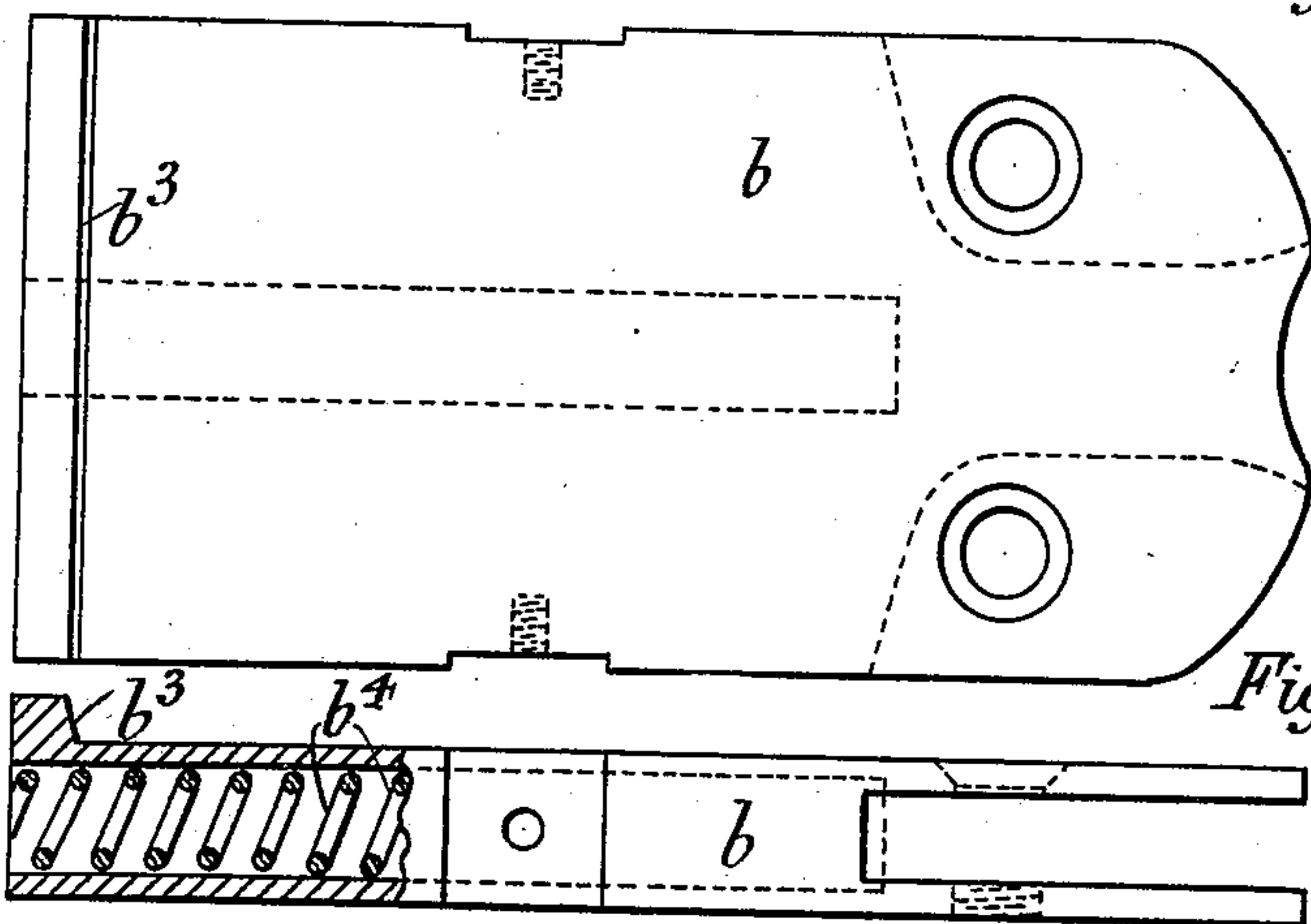
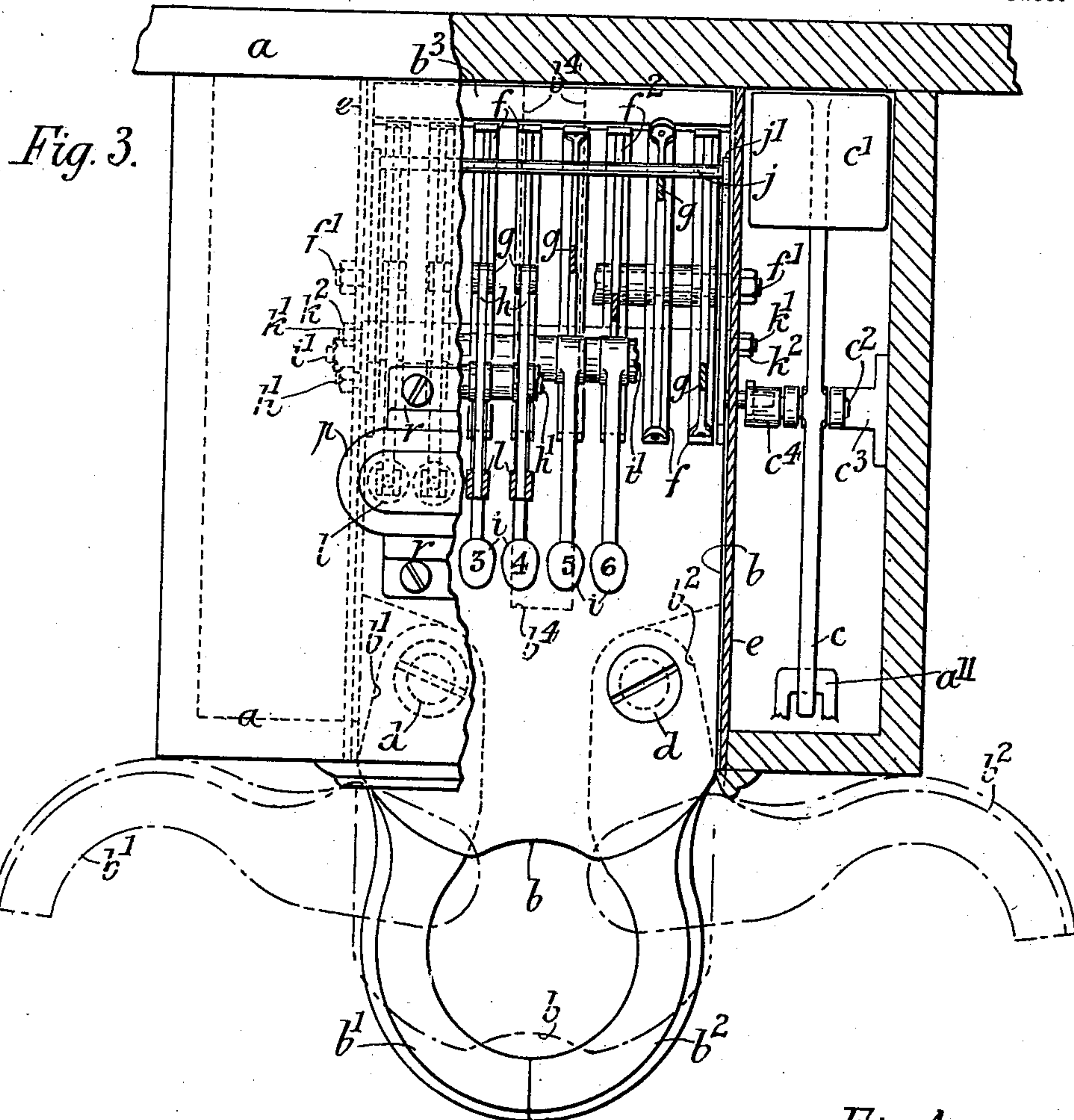
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

ALFRED CHARLES RICE, OF LONDON, ENGLAND.

COIN-FREED HOLDER OR STAND FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 620,361, dated February 28, 1899.

Application filed March 16, 1898. Serial No. 674,031. (No model.)

To all whom it may concern:

Be it known that I, ALFRED CHARLES RICE, a subject of the Queen of Great Britain and Ireland, residing at London, England, have invented a certain new and Improved Coin-Freed Holder or Stand for Cycles, of which the following is a specification.

My invention relates to an improved coin-freed holder or stand for locking cycles in thoroughfares, shops, houses, and elsewhere and so prevent them being stolen or taken away in error, a special feature of such invention being the use, in conjunction with the holder or stand, of a slotted or perforated ticket or plate for unlocking the releasing mechanism.

To render my invention readily understood, I will describe it fully with reference to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section; Fig. 2, a front elevation, also partly in section; and Fig. 3 is a sectional plan taken on the line A B of Fig. 2. Figs. 4 and 5 are a plan and side elevation, respectively, of a detail. Fig. 6 shows one form of ticket or the like that is used in connection with this holder or stand.

In all the figures the same letters of reference indicate like parts.

For the purpose of my invention I arrange in a box or casing a a mechanism for locking and unlocking a sliding bar, block, or plate b , which normally projects through the front of said box and carries hooks or claws, to which the cycle is to be secured. The upper front part of this box is provided with a door a' , by raising which access is obtained to the said mechanism. A slot a^2 at any convenient part—say in the top of the box—serves for the introduction of the coin for unlocking this door. The coins on being introduced bring about the unlocking of the door and fall into a compartment a^3 at the bottom of the box, from which they are removed from time to time, as desired, through a door a^4 , ordinarily kept fastened by a lock a^5 or by any other means. The door a' on being closed is secured by a pivoted catch c , the rear end of which carries a pan or plate c' (or a bucket) for the reception of the operating-coin. Said catch pivots about an axis c^2 , journaled in a bracket c^3 , fixed to one side of the box or casing a , and

this axis carries at one of its ends an arm c^4 , the purpose of which is hereinafter described.

The box a is secured in any convenient manner to a wall, post, or other object. The sliding bar or block b passes through an aperture a^* in the front of the box and has pivotally attached to its outer end by pins d a pair of hooks or claws $b' b^2$, designed to grip and retain any suitable part of the cycle—as, for instance, its head or one of its wheels—and prevent it being removed by any one not supplied with a proper ticket or plate. The inner or pivoted portions of the claws $b' b^2$ follow the sliding bar b when this latter retires into the aperture a^* and on coming into contact with the sides of the aperture cause such claws to close automatically, as will be readily understood on inspection of Fig. 3. The sliding bar has at its rear a heel or projection b^3 , by which it is locked, but when released by the locking mechanism is shot outward by a spring b^4 and allows the claws to be opened, as shown in dotted lines in Fig. 3.

The mechanism which I find it advantageous to employ for locking the sliding bar in its rearward position is arranged above the same in a framing e , and consists of a number of rocking levers f —say eight—mounted loose and at slight distances apart on an axis f' , secured in the sides of the framing e . The ends of these rocking levers terminate at a suitable angle, the rear ends being higher than the front ends, and between these ends an inclined rod f^2 is firmly fixed. On each of the rods f^2 is threaded a connecting-rod g , adapted to travel along them. When these rods g are moved into their rearward position, they depress the rocking levers f and so bring them into engagement with the heel b^3 on the sliding bar b , while when in their forward position they hold the rocking levers horizontally and out of engagement with the sliding bar. Each connecting-rod g is pivoted at its upper end by a pin to a lever h , and said pins are arranged in a vertical line above the axis f' . These connecting-rods can be moved one by one from the front to the rear of the rods f^2 by means of setting-levers i , mounted loose on a rod i' , the ends of which are secured in the sides of the framing e . The vertical arm i^2 of each setting-lever bears against its corresponding connecting-rod, and it is obvious

that when the longer arm i is depressed it will push its connecting-rod toward the rear, so locking the sliding bar b . The connecting-rods cannot be returned from the rearward
 5 to the forward position by any extraneous means, but only by the action of the sliding bar at the moment that it is shot forward when the mechanism is unlocked. This is effected by means of a cross-bar j , held in a
 10 suitable position behind the connecting-rods by two arms j' , fixed to the sides of the sliding bar b .

The sliding bar is guided between the sides of the framing e and is kept in contact with
 15 a base or bridge plate a^6 by means of a guide-roller k , mounted on a rod k' , secured to said framing by nuts k^2 , and said guide-roller acts at the same time as a stop to limit the extent of travel of the sliding bar. This latter is
 20 further arranged to prevent the door-catch being operated by the introduction of a coin or otherwise after the cycle has been secured in the gripping-claws, and to this end it is provided with a pin a^7 , projecting from the
 25 side nearest the door-catch c and passing through the framing e , so preventing passage to the arm c^4 , hereinbefore mentioned, and retaining it while the sliding bar b is in its rearward position.

30 The levers h rock loosely on an axis h' , and their forward ends are pivotally connected to spring-controlled keys or pushers l , the upper portions of which pass through an aperture in the top of the box a . These keys are
 35 guided near their lower ends in a perforated plate m , fixed to the box, and are kept in their raised position by coiled springs n , arranged between the plate m and collars l' , formed on or secured to the stem of the keys.
 40 The upper ends l^2 of said keys project into a hole p^* , formed in a spring-controlled depressible block or plunger p , and terminate close to and below a horizontal slit p' in said plunger. This latter is normally kept raised
 45 by any suitable means—such, for instance, as two longitudinally-arranged springs q —and is guided and retained by moldings or beadings r , fixed to the outside of the box a . The hole p^* , into which the ends l^2 of the keys project, is of a depth equal to the distance of the
 50 stroke of the plunger, so that this latter may be depressed without actuating the keys.

The slit p' serves for the insertion of the ticket or metal plate (which is supplied to the
 55 user of the apparatus) and is so formed as to insure the ticket or plate being inserted in the proper position.

The construction of the stand or holder having been described in detail, I will now explain the working. The predetermined coin
 60 on being dropped through the slot a^2 falls down a double chute a^7 a^8 onto the pan (or bucket) of the pivoted catch c , thereby causing the front end of this latter to rise until
 65 it strikes against a stop a^9 on the door a' . This prevents the coin being shot at once into the compartment a^3 and the catch refasten-

ing the door until the operator has had time to raise the door and set the locking mechanism. On now opening the door by pulling
 70 the handle a^{10} the stop a^9 releases the catch and allows it to rise farther up until the coin falls off, and then permits the catch to return to its initial or horizontal position, this being effected by the weight of its front arm
 75 exceeding that of its rear arm. To insure the catch being in the proper position for reengaging the door-staple a^{11} , its nose when descending is arrested by the framing e ; but any other suitable stop may be used for this
 80 purpose. The door being now open, any two or more of the setting-levers i (which are all marked with any suitable signs, numerals, or letters) can be depressed, while leaving the remaining ones undisturbed. Thus with
 85 eight levers, as shown in the drawings, a very large variety of combinations for locking the sliding bar, and with it the claws, can be produced. The part of the cycle to be gripped by
 90 the claws is now placed against the outermost end or head of the sliding bar, which is then pushed inward, so closing the claws, and the sliding bar is then retained in position by the
 95 rocking levers f , as shown in Fig. 1. The operator is supplied with a perforated or slotted ticket or plate to enable him on his return to operate the mechanism and release the
 cycle, it being of course necessary for him to have previously set the levers i in accordance with such ticket. Thus, for instance, sup-
 100 posing the setting-levers i to be marked with consecutive numerals from "1" to "8" and a ticket or plate also to be marked in the same order and by the same numerals and perforated or slotted at all the even numbers "2,"
 105 "4," "6," and "8," as shown in Fig. 6, and such perforations or slots to coincide in size and position with the keys l , it will then be necessary for the operator to depress all the
 110 setting-levers marked with the odd numbers "1," "3," "5," and "7." To release the machine, he inserts the ticket or plate in the proper position into the slit p' of the key-actuating plunger p and then depresses this latter
 115 by hand, so causing the imperforate parts to press down the keys marked with the odd numbers "1," "3," "5," "7," while the perforations marked "2," "4," "6," and "8" in such
 120 ticket or plate will slip over the keys bearing the even numbers and leave them undisturbed. By thus depressing these keys l the rear of the corresponding levers f will be
 125 lifted by the connecting-rods g , (in connection with the levers h ,) and the spring b^4 will then act to push the sliding bar forward and so enable the cycle to be removed from the
 130 claws. On the forward movement of the sliding bar b the rod j , carried between the arms j' , restores the connecting-rods g to their initial position near the front end of the levers f , and the apparatus is then ready to receive another cycle. The next user may be supplied with a ticket or plate bearing a different combination of perforations or slots

in cases where the first user may have retained his ticket.

Having described my invention, I claim and desire to secure by Letters Patent—

5 1. In a coin-controlled mechanism, a door retained by said coin-operated mechanism, a sliding bar for engaging and holding a cycle, means operated from the interior of the apparatus for locking said sliding bar in its
10 inward position, and means for releasing said cycle-holding bar from the exterior through the intervention of a slotted or perforated ticket or plate, substantially as set forth.

15 2. In a coin-controlled mechanism having a locking-catch, a door secured by the catch, a sliding bar having pivoted claws or hooks to engage and hold the cycle and a heel or projection, a locking mechanism to engage the heel of the cycle-holding bar and means
20 for releasing the same, substantially as set forth.

3. In a coin-controlled mechanism having a locking-catch, a door held by the said catch, a lever-arm fixed to the axis of the catch, a
25 sliding cycle-holding bar and means connected therewith for retaining the lever-arm to render the coin-controlled mechanism temporarily inoperative, substantially as set forth.

30 4. In a coin-controlled mechanism having a locking-catch, a door held by the catch, a locking mechanism, a sliding cycle-holding bar having pivoted claws or hooks at its outer end and a heel or projection at its inner end to be engaged by the locking mechanism, and
35 a spring for advancing said sliding bar when releasing the cycle, substantially as set forth.

5. In a coin-controlled mechanism having a locking-catch and a door held by the catch, a sliding cycle-holding bar having pivoted
40 claws or hooks, and a heel or projection, a locking mechanism engaging the same, an internally-placed spring for forcing the sliding bar forward, and a guide-roller mounted above it and serving at the same time as a stop when
45 engaged by said heel to arrest the forward movement of the bar, substantially as set forth.

6. In a coin-controlled mechanism, means for rendering the same inoperative, a spring-
50 actuated sliding bar and pivoted claws or hooks at the outer end of the same moving through an aperture in the case whereby said claws on coming into contact therewith are automatically closed, substantially as set
55 forth.

7. In a coin-controlled mechanism substantially as described, means for rendering the same inoperative while the cycle is secured, a spring-actuated sliding bar and pivoted
60 claws or hooks at the front and a heel or projection at the rear and locking-levers to engage said heel and secure the sliding bar in its inward position and means for actuating the locking-levers, substantially as set forth.

65 8. In a coin-controlled mechanism substantially as herein described, means for rendering the same inoperative while the cycle is

secured, a spring-actuated sliding bar having a heel or projection, rocking levers mounted on an axis and each having an inclined rod
70 and a connecting-rod engaging the inclined rod and means for suspending the connecting-rod from above and for actuating the same; whereby the rocking levers are either locked or released, substantially as set forth. 75

9. In a coin-controlled mechanism substantially as described, means for rendering the same inoperative while the cycle is secured, a spring-actuated sliding bar, rocking levers
80 to engage and lock the sliding bar, suspended connecting-rods for moving the rocking levers and setting-levers for moving said connecting-rods and rocking levers into their locking position, substantially as set forth.

10. In a coin-controlled mechanism sub-
85 stantially as described, means for rendering the same inoperative while the cycle is secured, a spring-actuated sliding bar, rocking levers for engaging and locking the sliding bar, suspended connecting-rods for moving
90 the rocking levers, setting-levers for moving said connecting-rods and rocking levers into their locking position, and means connected with the sliding bar for automatically resetting the suspended connecting-rods and rock-
95 ing levers to their initial or unlocked position, substantially as set forth.

11. In a coin-controlled mechanism substantially as described, means for rendering the same inoperative while the cycle is se-
100 cured, a spring-actuated sliding bar having pivoted claws or hooks and a heel or projection, rocking levers for engaging said heel and locking this sliding bar and pivoted connecting-rods connected to the rocking levers,
105 and means for actuating the connecting-rods, substantially as set forth.

12. In a coin-controlled mechanism substantially as described, means for rendering the same inoperative while the cycle is se-
110 cured, a spring-actuated sliding bar having claws or hooks and a heel or projection, rocking levers for engaging said heel and locking this sliding bar and connecting-rods for actuating the rocking levers, and operating-levers
115 each furnished with a key for releasing the aforesaid rocking levers, substantially as set forth.

13. In a coin-controlled mechanism, means for rendering the same inoperative while the
120 cycle is secured, a spring-actuated sliding bar, rocking levers, connecting-rods and setting-levers for actuating the same and sliding rods, operating-levers and depressible keys for releasing the rocking levers and a
125 spring-controlled plunger receiving the upper ends of the keys, substantially as set forth.

14. In a coin-controlled mechanism sub-
130 stantially as described, means for rendering the same inoperative while the cycle is secured, a spring-actuated sliding bar, means for locking said sliding bar and means including operating-keys and a spring-controlled

plunger having a slit for the insertion of a ticket or plate and into which the operating-keys enter for releasing such locking mechanism, substantially as set forth.

5 15. In a coin-controlled mechanism, means for rendering the same inoperative while the cycle is secured, a sliding cycle-holding bar having hooks at the forward end and a heel at the rear end and a spring for actuating the
10 same in one direction, rocking levers to engage the heel and lock said bar and rods connected thereto, setting-levers for moving said rods and rocking levers in one direction, operating-levers and depressible keys connected
15 to said rods and a spring-retained plunger having a slit to receive a perforated plate or ticket adapted to engage the keys for operating said parts and releasing such locking devices and a cross-bar and connection there-
20 from to the cycle-holding bar for returning the parts to their normal position with the release of the cycle, substantially as and for the purposes set forth.

25 16. In a coin-controlled mechanism substantially as described, having a rocking

catch, a casing formed with separate compartments for the coin and the coin-controlled mechanism, the sliding bar and mechanism for locking the same, and setting-levers for the locking mechanism, and a door retained
30 by the said catch for closing the one of the compartments, substantially as set forth.

17. In a coin-controlled mechanism, means for rendering the same inoperative while the cycle is secured, a spring-actuated sliding bar
35 having claws for gripping a cycle, mechanism for locking said sliding bar, setting-levers for actuating the locking mechanism, a door which normally prevents access to the setting-levers and having a staple and a stop on the
40 inner side for engagement by the catch of the coin mechanism, substantially as and for the purposes set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.
45

ALFRED CHARLES RICE.

Witnesses:

GEORGE ERNEST MINTERN,
W. J. SKERTEN.