

No. 629,759.

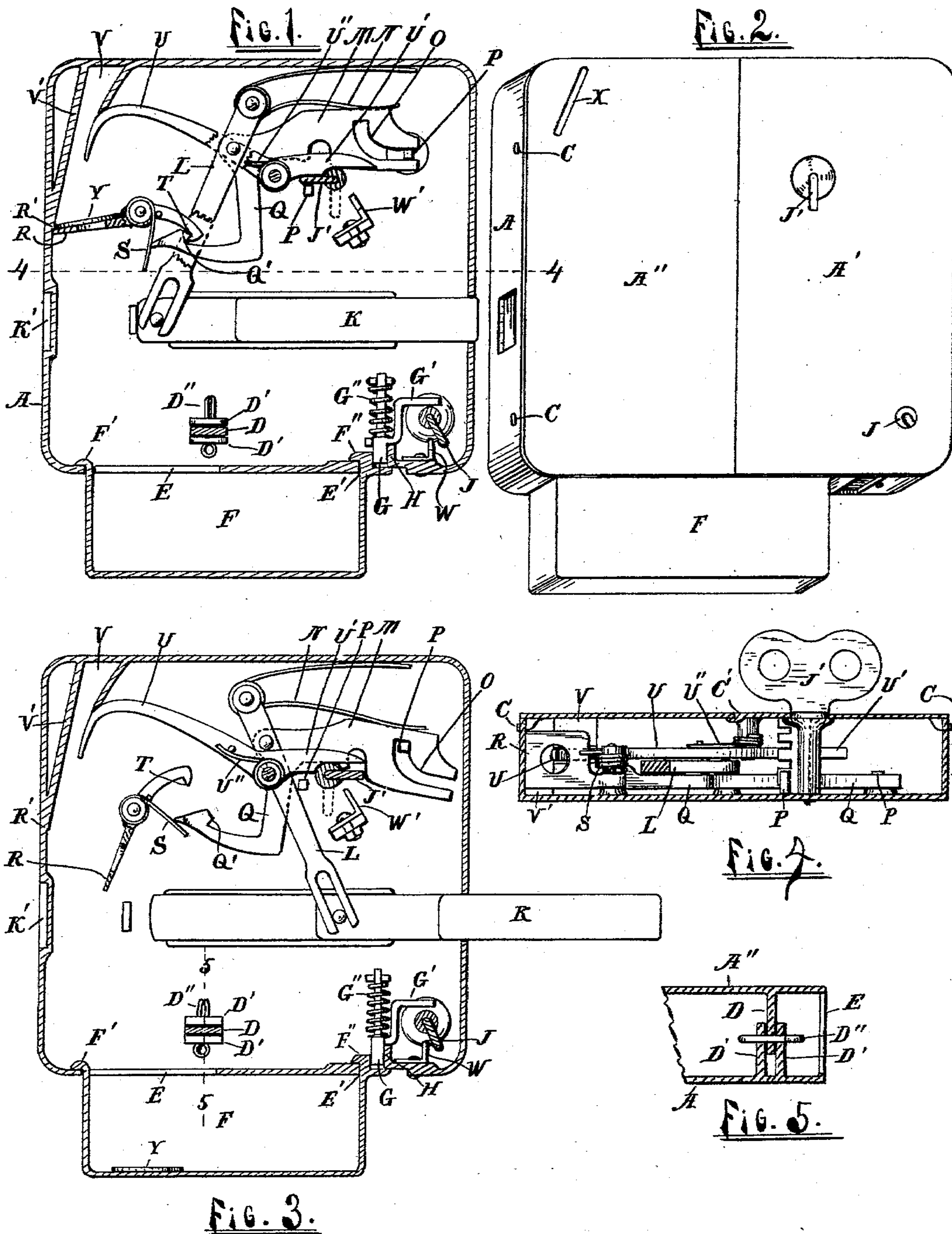
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D. B. AUSTIN.

COIN CONTROLLED LOCK FOR BICYCLE STANDS.

(Application filed Aug. 1, 1898.)

(No Model.)



WITNESSES:
Thomas F. Carroll
Palmer A. Jones

INVENTOR:
Dow B. Austin
 By *Moulton & Flanders*

UNITED STATES PATENT OFFICE.

DOW B. AUSTIN, OF GRAND RAPIDS, MICHIGAN.

COIN-CONTROLLED LOCK FOR BICYCLE-STANDS.

SPECIFICATION forming part of Letters Patent No. 629,759, dated August 1, 1899.

Application filed August 1, 1898. Serial No. 687,408. (No model.)

To all whom it may concern:

Be it known that I, DOW B. AUSTIN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Coin-Controlled Locks for Bicycle-Stands; 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.

My invention relates to improvements in coin-controlled locks for bicycle-stands; and its object is to provide the same with certain new and useful features hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a lock embodying my invention with one side of the case removed and the parts shown in unlocked position; Fig. 2, a perspective of the lock entire; Fig. 3, the same as Fig. 1 with the parts in locked position; Fig. 4, a transverse section on the line 4 4 of Fig. 1, showing the parts above the line; and Fig. 5, a detail section on the line 5 5 of Fig. 3.

Like letters refer to like parts in all the figures.

A represents the case, having a removable cover A' A'', divided into substantially two equal parts, each part being secured at the outer edges by hooks C, engaging openings in the sides of the case, and at the adjacent edges the part A' is provided with a rabbet C', engaged by the edge of the part A'', whereby the former is held in place, the latter being secured by a lug D on its inner surface, passing between lugs D' D', projecting from the opposite side of the case, all of said lugs being provided with openings, in which openings is inserted a cotter-pin D'', removable through an opening E in the bottom of the case when the coin-receptacle F is detached. Said receptacle consists of a box open at the top and provided with hooks F' F'', turned in the same direction and adapted to pass through the openings E and E' in the lower wall of the case A and engaging the side of said openings by sliding the box F endwise, and are secured by a bolt G, passing between

the back of the hook F'' and an abutment H on the case. Said bolt is provided with a spring G'' to hold it in place, and a laterally-projecting arm G' is engaged by a suitable key J to withdraw said bolt and release the coin-receptacle E.

The above-described case and coin-receptacle are not claimed herein, but are reserved for a separate application to be filed later.

K is a sliding bolt adapted to pass through a bicycle-wheel and enter a recess K' in the adjacent lock when a series of such locks are arranged in a frame and at a suitable distance from each other to receive bicycle-wheels between them. Said bolt is operated by a lever L, pivoted to the case at one end and having its movable end forked and engaging a pin in the bolt K.

M is a tumbler pivoted to the lever L near the pivoted end of said lever and having a curved slot O, traversing a post P, and a spring N, which yieldingly presses the tumbler downward. From near the pivot of the tumbler an arm Q extends downwardly and thence horizontally, being provided near its end with an upwardly-projecting hook Q' to engage a latch T, pivoted within the case, and having a plate R extending opposite of its pivot. Said plate is provided with a central opening to permit the releasing-arm U to pass through the same. Said releasing-arm is pivoted to the cover of the case to permit the lever L to pass by and has a downwardly-turned end adapted to pass through the opening in the plate R and is oppositely extended from its pivot, as at U', which extension is engaged and raised by the key J'. The releasing-arm U is yieldingly held in raised position by a spring U''. A spring-arm S is attached to the plate R and latch T, which arm is engaged by the end of the arm Q. When the hooks Q' and latch T are engaged, said spring-arm holds the plate in raised position against a stop R' in the case and also holds the latch T in engagement with the hook Q. Thus the latch T, the plate R, and the flexible arm S are all connected to each other and extend radially from a common pivot and turn together thereon.

P' is a lug which engages the key and limits its movement.

W and W' are wards for the respective keys J and J'.

V is a chamber or coin-chute open at the bottom and having an inclined wall V', into which chute the coin Y is inserted by way of the opening X in the cover of the case.

The wards W W' may be varied to suit different keys, and the tumblers M may be increased as convenient.

When the device is locked, the key may be turned to the proper position and removed from the lock, and when the device is unlocked the lug P prevents turning the key to said position, and the engagement of the hook R' and latch T holds the device against the key when turned in the opposite direction. In order to release the hooks and permit of locking the device, a suitable coin Y must be placed in the chamber V, whence it will fall upon the plate R, the wall V' insuring against standing the coin on edge upon the plate. When the key is turned to the right, it first engages the extension U' and depresses the releasing-lever U, which strikes the coin and presses it, together with the plate R, downward, thus raising the latch T out of engagement with the hook Q'. The tumbler can now be moved by the key, which carries the lever L and bolt K to locked position, where the parts are held by the post P, engaging the side of the slot O in the tumbler. This forward movement of the tumbler carries the end of the arm Q to the right and upward, thus releasing the tension on the spring-arm S, which permits the same, together with the plate R and latch T, to turn to the position shown in Fig. 3, thus permitting the coin Y to fall through the opening E into the coin-receptacle F. As the key turns, the lever U is again restored to the elevated position by the spring U''. Should a washer be placed in the device, the end of the lever U will pass through the opening in the same and the device will not operate. When it is desired to remove the coin-receptacle F, a key J, adapted to pass the wards W and engage the arm G', is inserted and the bolt G lifted thereby, when the receptacle F may be moved to the right sufficient to release the hooks. When this is done, the cover of the lock may also be removed by withdrawing the cotter-pin D'' through the opening E. If the key J is turned the wrong way, it will strike the end of the arm G' and will not raise the bolt G.

Having thus fully described my invention, what I desire to secure by Letters Patent is—

1. In a lock, a latch engaging and holding the bolt-operating mechanism, a plate attached to the latch and having an opening, a coin-chute above said plate, a pivoted lever having its end adapted to pass through the opening in the plate and operated by the key of the lock to release the latch when a coin is on the plate, substantially as described.

2. In a lock, a latch, a plate having an opening, and a flexible arm, all connected to each

other and radiating from a common pivot, said latch and arm engaging a device connected with the bolt-operating mechanism of the lock, and an inclined coin-chute and stop above said plate, substantially as described.

3. In a lock, a tumbler connected to the bolt and operating the same, a post engaged by the tumbler to hold the bolt in locked position, a latch engaging a hook on the tumbler to hold the bolt in unlocked position, a plate attached to said latch and having an opening, and a case having an inclined chute above the said plate, and a stop engaging the plate, and a pivoted lever operated by the key and adapted to pass through the opening of the plate, or to engage a coin on the plate, substantially as described.

4. In a lock, a sliding bolt, a pivoted lever operating said bolt, a tumbler pivoted to said lever, a hook on said tumbler, a latch engaging the hook on the tumbler, a plate attached to said latch to receive a coin, and a coin-chute above the plate, substantially as described.

5. In a lock, a sliding bolt, a pivoted lever operating said bolt, a tumbler pivoted to said lever, a hook to hold said parts from moving, a latch to engage said hook, a plate to operate the latch and having an opening, a pivoted lever having its end adapted to pass through said opening, and operated by the key, substantially as described.

6. In a lock, in combination with a sliding bolt, a lever pivoted at one end to the case and engaging said bolt at the other end, a tumbler intermediately pivoted to said lever and having a curved slot traversing a post, an arm on said tumbler having a hook near its end, a latch engaging said hook, a plate having an opening and attached to said latch at the opposite side of its pivot, a flexible arm attached to said latch and plate to operate the same and engaged by the end of said arm, and a pivoted lever having its end adapted to pass through the opening in the plate, and operated by the key of the lock, substantially as described.

7. In a lock, the combination of a sliding bolt, a lever pivoted at one end and having its other end forked and engaging a pin in said bolt, a tumbler pivoted to said lever and having a curved slot engaging a post, an arm extending from said tumbler and having a hook near its end, a spring engaging said tumbler, a latch, a plate having an opening, and a flexible arm connected to each other and extending radially from a common pivot and turning together thereon, a lever pivoted to the case and having its end adapted to pass through the opening in the plate, and operated by the key, and a spring to support said lever, substantially as described.

8. In a lock, a case having a recess in its side, a sliding bolt, an inclined coin-chute, a stop at the lower end of the chute, a pivoted lever engaging the bolt, a tumbler pivoted to said lever and having a curved slot engaged by a post on the case, an arm on the tumbler

5 having a hook, a latch engaging the hook, a flexible arm connected to the latch and engaged by the arm on the tumbler, a plate attached at one side to the latch and engaging the stop on the case at the other side and having an opening, a lever pivoted to the case and engaged by the key and having one end adapted to pass through the opening in the

plate, or to engage a coin on the plate and release the latch, substantially as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

DOW B. AUSTIN.

Witnesses:

LUTHER V. MOULTON,
PALMER A. JONES.