No. 617,693. Patented Jan. 10, 1899.

H. G. SHULTZ.

COIN CONTROLLED LOCK AND HOLDER FOR BICYCLES.

(Application filed Apr. 16, 1898.)

(No Model.)

Fig. 1.

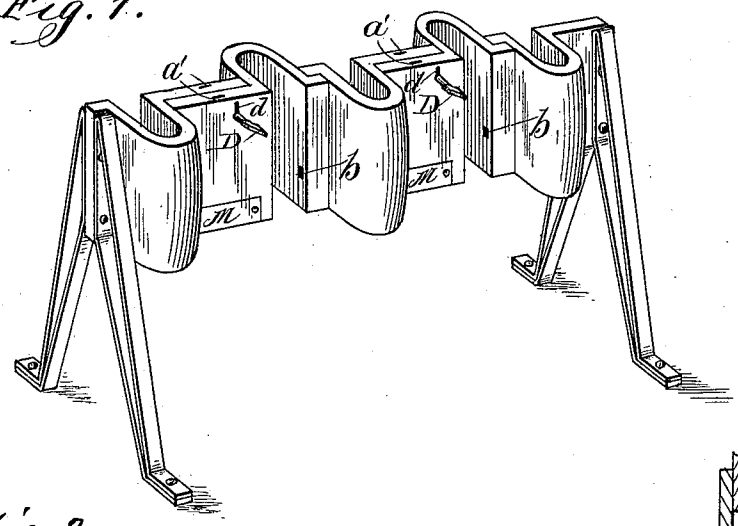


Fig. 2.

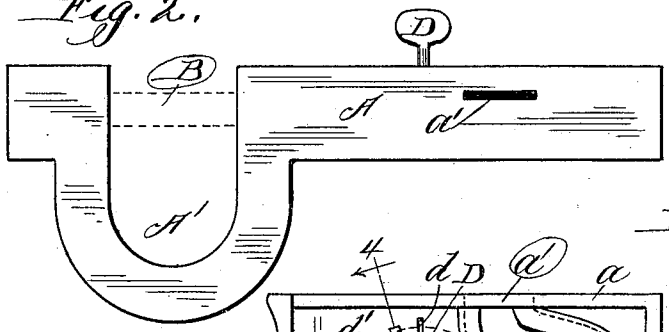


Fig. 3.

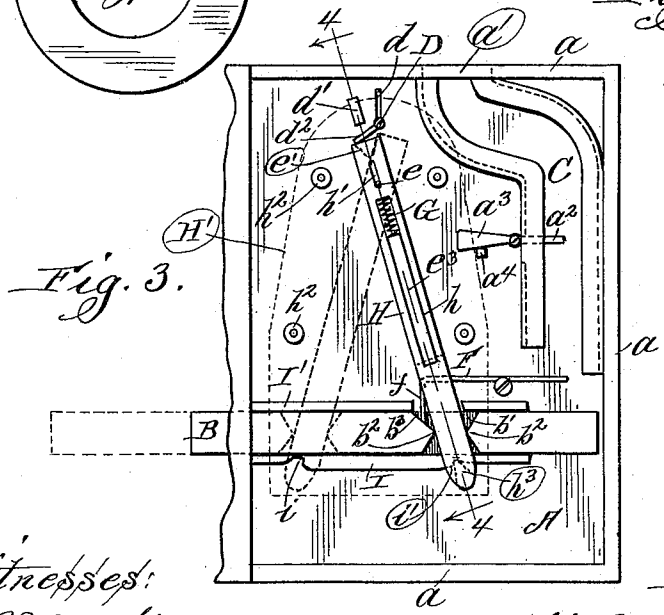
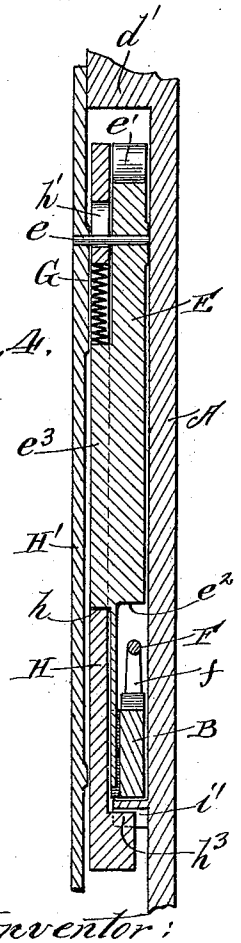


Fig. 4.



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UNITED STATES PATENT OFFICE.

HORATIO G. SHULTZ, OF CHICAGO, ILLINOIS.

COIN-CONTROLLED LOCK AND HOLDER FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 617,693, dated January 10, 1899.

Application filed April 16, 1898. Serial No. 677,791. (No model.)

To all whom it may concern:

Be it known that I, HORATIO G. SHULTZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Coin-Controlled Lock and Holder for Bicycles, of which the following is a specification.

This invention relates to improvements in that class of locks and holders used for supporting bicycles in an upright position and locking them in such position to prevent their removal known as "coin-controlled" locks and holders; and it has for its principal object to afford a lock and holder or a locking-holder for bicycles in which the key to the lock thereof may be released and the wheel of the bicycle locked in position or the device operated only by the deposit of a coin.

Another object of my invention is to so construct the device as to afford a receptacle for the coins and to prevent them being withdrawn after releasing the key by means of a string attached to them.

A further object is to make the locking-holders of such a form that a number of them may be secured together, so as to provide a strong and durable rack, with the receptacles thereof for the wheels arranged alternately on its sides.

With these and other objects hereinafter to be mentioned in view the invention consists in the novel features of construction, arrangement, and combination of parts thereof, as will be hereinafter more fully set forth and specifically claimed.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a perspective view of a number of my locking-holders, showing them secured together and suitably supported to form a rack, with the openings or receptacles for the wheels of the bicycles located alternately on its sides. Fig. 2 is a plan view of one of the locking-holders. Fig. 3 is a view in elevation of a part of the holder with a portion of the casing removed to show the interior or locking mechanism; and Fig. 4 is an enlarged sectional view taken on line 4 4 of Fig. 3, looking in the direction indicated by the arrows.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the body or casing of the holder, which is provided near one of its sides with a recess A′, usually U-shaped, for the reception and retention of the tire and rim of the bicycle-wheel, which will be locked therein by means of a horizontal bolt B, extending across the recess A′ near its mouth and engaging an opening *b* in one of the walls or sides of the recess or wheel-receptacle. The portion of the body A to one side of the recess A′ is formed or provided at its perimeter with a rearwardly-extending flange *a* to form a hollow casing for the reception and operation of the locking mechanism, and the upper part of said portion of the body is provided with a slot *a′* for the deposit of the coins. Extending from the slot or opening *a′* downwardly into the casing is a chute or guideway C for the passage of the coins and which is usually curved at its upper portion, as is clearly shown in Fig. 3 of the drawings.

Pivotally secured to the interior of the casing A is a lever a^2, which has one of its ends extending into the chute or guideway C and its other end enlarged or weighted, as at a^3, to cause it to normally rest on the projection a^4 on the casing. This lever is employed to prevent the withdrawal of the coins through the guideway and slot therefor by means of a string attached to the coins, for it is apparent that when the coin strikes the end of the said lever extending into the guideway its weight will overcome the weighted end of the lever, thus causing it to tilt on its pivot and allowing the coin to pass, when the lever will assume its horizontal position and block the guideway.

In the upper portion of the front part of the casing is formed an opening *d* for the reception and operation of the key D, which may be of the ordinary or any preferred construction. To one side of the opening or keyhole *d* is located a lug *d′* to prevent the key being turned in but one direction. Secured to the body or casing A near its upper end by means of a pivot or pin *e* is an operating-bar E, which has its upper end formed with a recess or fork

e' to receive the projection d^2 on the stem of the key. The lower portion of the operating-bar E is formed with a recess e^2 in its surface adjacent to the surface of the casing for the operation of the controlling-lever F, which is fulcrumed in the casing and has at one of its ends a downturned arm f to engage the locking-bolt B to prevent it being extended. The rear surface of the bar E is provided with a longitudinal rib e^3, which fits in a longitudinal slot h in the sliding bar H, which is provided near its upper end with another longitudinal slot h', through which the pin e passes. This bar H lies on the rear surface of the bar E and is held in position by means of a plate H', secured to the casing on bosses h^2, located between the casing and said plate. The lower end of the sliding bar H extends somewhat beyond the lower end of the bar E and is provided on its surface adjacent to the casing and at its lower end with a projection h^3 to engage recesses i and i' in the rail I, which, together with the rail I', located parallel therewith, forms a guideway for the bolt B, which bolt is formed in its rear surface with a recess b' for the reception of the lower portion of the operating-bar E. The sides of the recess b' are preferably formed with angles b^2 to rest against the edges of the said bar. The bolt B is also provided at a proper point on its upper surface with a recess b^3 for the reception of the downturned end of the controlling-lever. Located between the upper end of the rib e^3 on the bar E and the upper end of the slot h in the sliding bar H is a spring G, which normally holds the projection h^3 on the lower end of the sliding bar in engagement with the recesses in the rail, forming a part of the guideway for the locking-bolt.

When a single holder is used, that portion of the casing or body containing the locking mechanism may be covered by a plate secured to the flanges a at the perimeter of the casing or body; but when two or more of the holders are secured together to form a rack, as shown in Fig. 1 of the drawings, it is apparent that said plate is not necessary.

The lower portion of the body or casing, in which the coins will be deposited, is provided with a door M, which may be opened for the removal of the coins.

From the foregoing and by reference to the drawings it will be seen and readily understood that by dropping a coin into the slot a it will pass therefrom through the guideway C until it strikes and rests on the end of the controlling-lever F, which will thereby be disengaged at its downturned end from the recess b^3 of the locking-bolt, when by turning the key the projection h^3 on the lower end of the sliding bar H will be disengaged from the recess i' in the rail I by reason of the impingement with the upper end of said bar of the projection d^2 on the key, which projection will also engage the recess or fork e' in the upper end of the bar E and cause it to turn on its pivot e and force the bolt B outwardly and across the recess A' or wheel-receptacle, in which the wheel may be placed, where it will be held by reason of the engagement of the projection h^3 on the bar H with the recess i, as shown by dotted lines in Fig. 3, after which the key may be withdrawn through the opening d therefor, when the spring G will cause the projection h^3 on the lower end of the sliding bar to engage the recess i in the rail I, and thus, together with the bar E, fitting in the recess b' of the locking-bolt, retain said bolt in its extended position. When it is desired to remove the wheel, the key may be inserted, when by turning it in the opposite direction the sliding bar H will be disengaged from the rail I and said bar, as well as the bar E, moved to the position shown by continuous lines in Fig. 3 of the drawings, at which time the controlling-lever F will engage the locking-bolt, and thus retain the key between the lug or projection d' and the upper ends of the bars H and E until another coin is deposited in the slot to again release the controlling-lever.

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

1. The combination with a body or casing provided with a receptacle for the wheel, and a slot for the deposit of coins, and an opening for a key, a guideway communicating with the slot, a locking-bolt located within the casing, a controlling-lever fulcrumed in the casing and adapted to engage at one of its ends the locking-bolt, a bar pivotally secured in its upper portion near the keyhole and provided at its upper end with a recess and at its lower portion with means to engage the locking-bolt, another bar movably secured on the first-named bar and having at its lower end means to secure it when in its retracted position, and a spring located near its upper portion to retract it, substantially as described.

2. The combination with a holder for the wheel of a bicycle, of a casing connected thereto and provided with a slot for the deposit of coins, and an opening for a key, a chute or guideway communicating with the slot and extending into the casing, a locking-bolt movably and horizontally located within the casing and having means to engage a controlling-lever, said lever fulcrumed in the casing and having one of its ends projecting under the chute or guideway, a bar pivotally secured in its upper portion near the keyhole and having its upper end formed with a recess, and means at its lower portion to engage the locking-bolt, a sliding and spring-actuated bar located on the first-named bar and having at its lower end means to secure it when in its retracted position, substantially as described.

3. The combination with a body or casing having a receptacle for the wheel and provided with a slot and keyhole, a guideway communicating with the slot, a locking-bolt

located within the casing and having recesses for the controlling-lever and operating-bar, a guideway for the locking-bolt provided in one of its sides with recesses, the operating-bar E, pivotally secured at its upper portion near the keyhole and provided with a recess in its upper end and engaging at its lower portion one of the recesses in the locking-bolt, a spring-actuated bar movably secured on the operating-bar and having at its lower end a projection to engage recesses in the side of the guideway for the locking-bolt, substantially as described.

4. The combination with a body or casing having a receptacle for the wheel and provided with a slot and a keyhole, a guideway communicating with the slot, a weighted lever pivotally secured to the casing and extending into the guideway to prevent the withdrawal of coins, a door located in the lower portion of the casing for the removal of the coins, a locking-bolt located within the casing and having recesses for the controlling-lever and operating-bar, a guideway for the locking-bolt provided in one of its sides with recesses, the operating-bar E, pivotally secured at its upper portion near the keyhole and provided with a recess in its upper end and engaging at its lower portion one of the recesses in the locking-bolt, a spring-actuated bar movably secured on the operating-bar, and having at its lower end a projection to engage recesses in the side of the guideway for the locking-bolt, substantially as described.

Chicago, Illinois, April 14, 1898.

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