

No. 614,433.

Patented Nov. 22, 1898.

D. B. AUSTIN.  
LOCK FOR BICYCLE STANDS.

(Application filed Jan. 24, 1898.)

(No Model.)

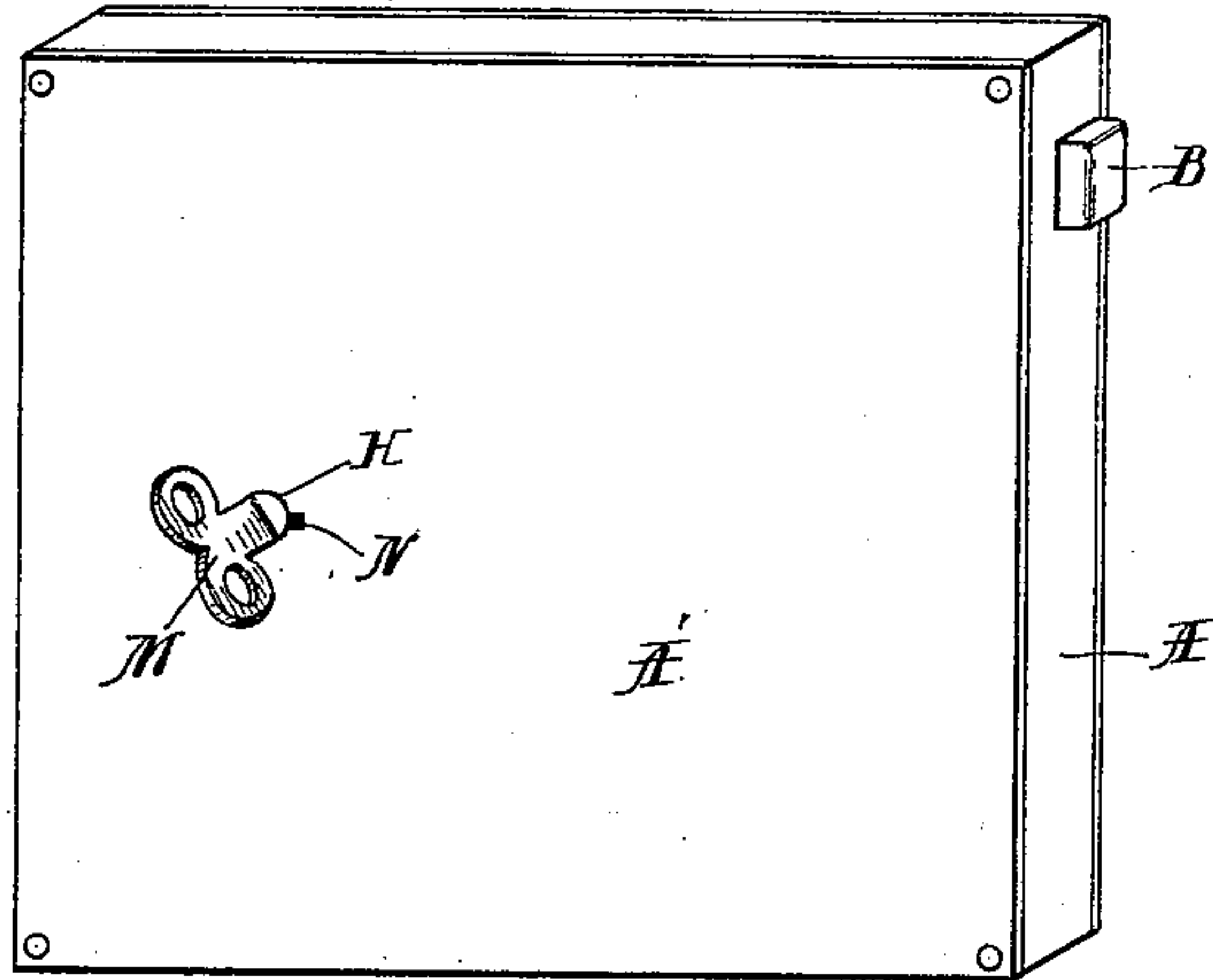


Fig. 1.

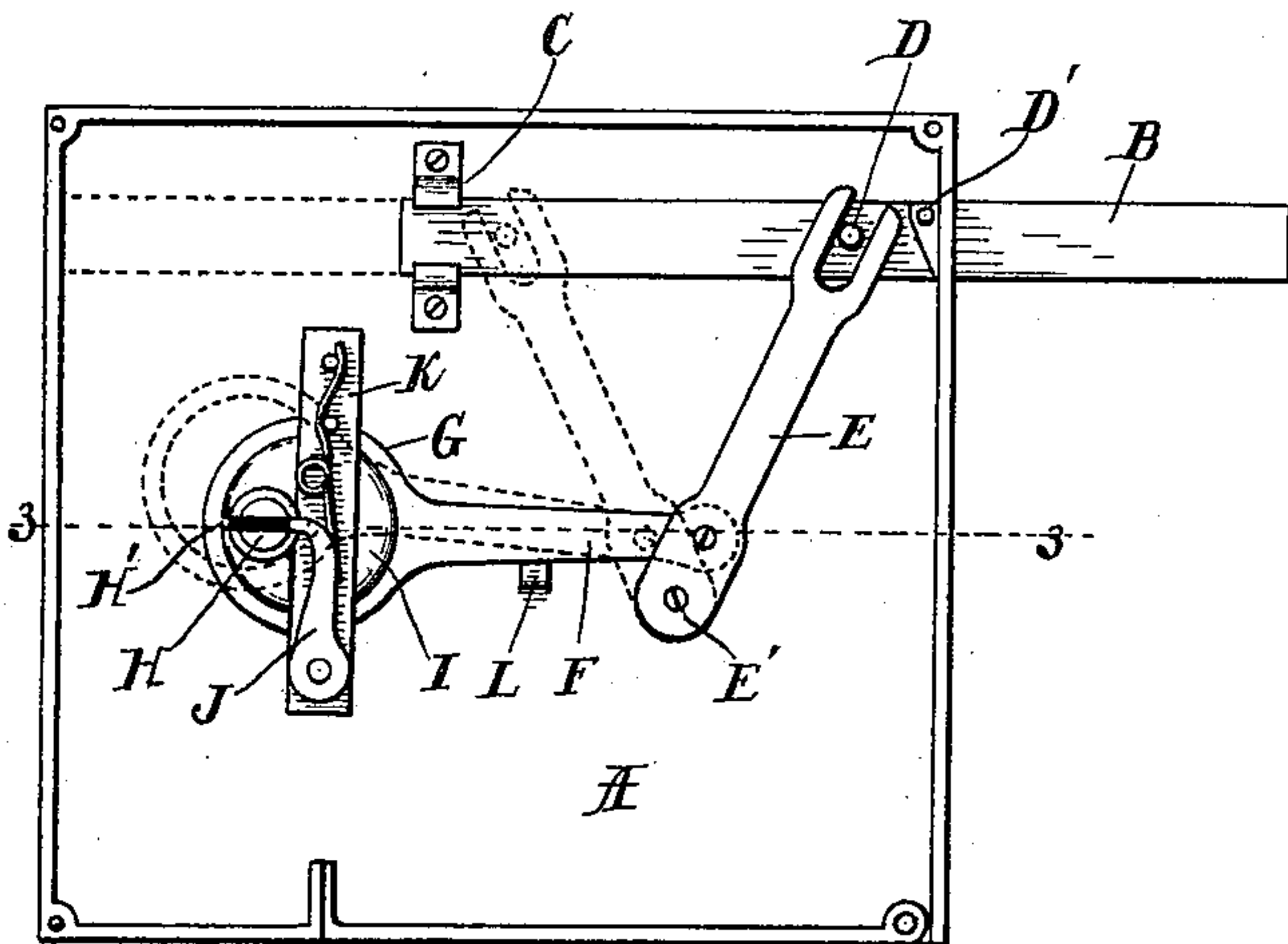


Fig. 2.

WITNESSES:

*George Hollway*  
*Ellis O. Wood.*

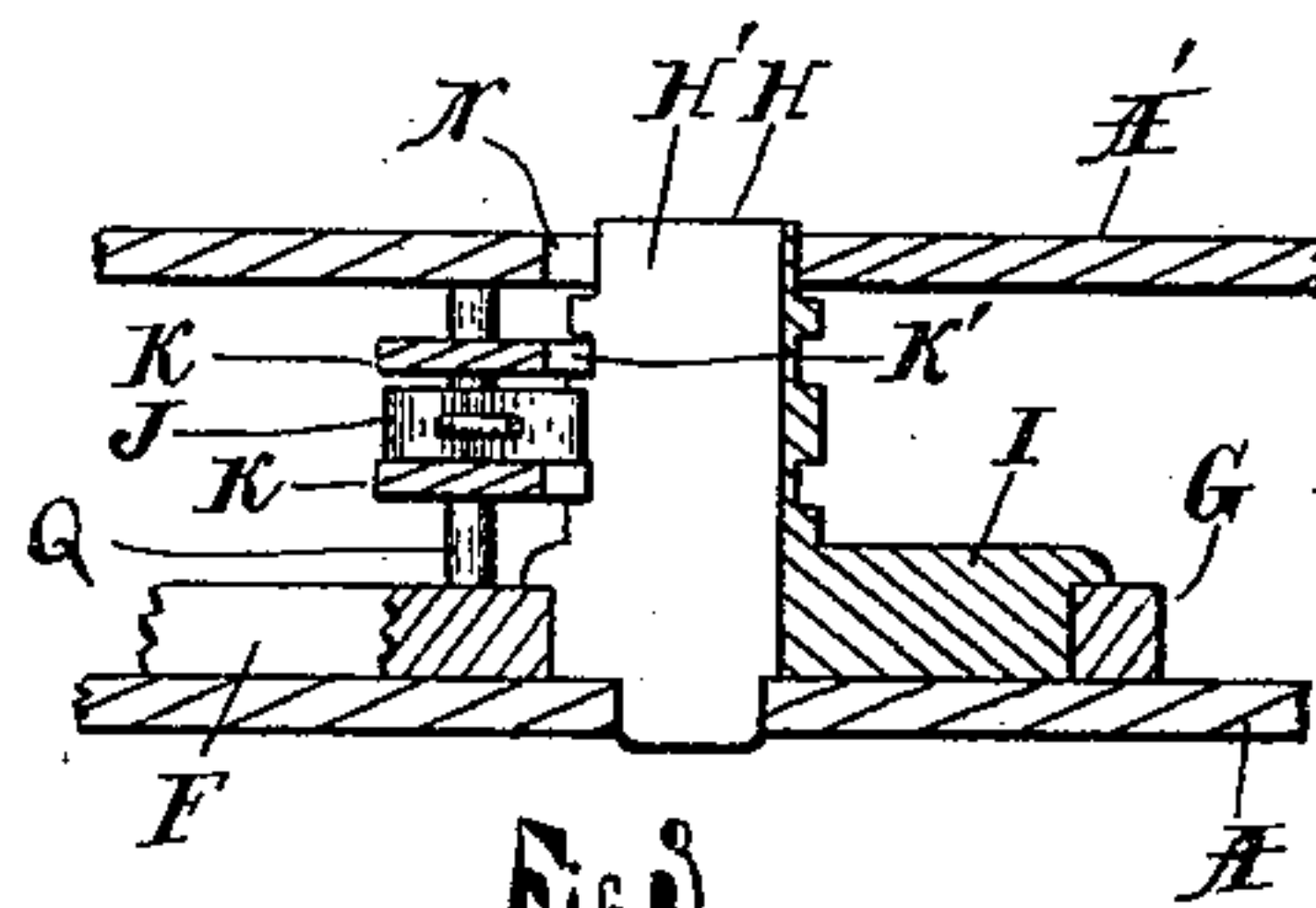


Fig. 3.

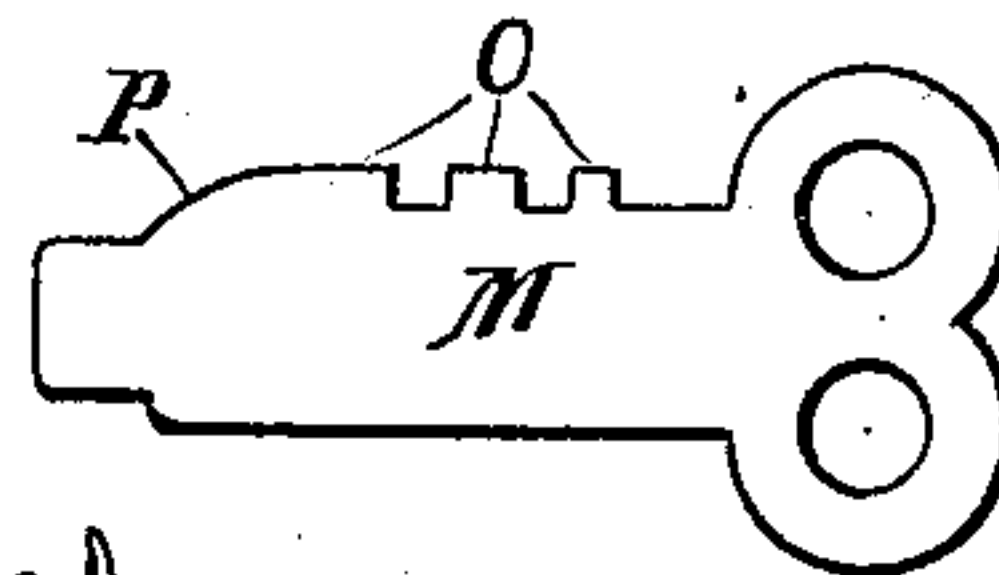


Fig. 4.

INVENTOR

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# UNITED STATES PATENT OFFICE.

DOW B. AUSTIN, OF GRAND RAPIDS, MICHIGAN.

## LOCK FOR BICYCLE-STANDS.

SPECIFICATION forming part of Letters Patent No. 614,433, dated November 22, 1898.

Application filed January 24, 1898. Serial No. 667,677. (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 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 locks for bicycle-stands; and its object is to provide a lock with a key-operated bolt adapted to project far enough to extend across the space between the posts of a bicycle-stand and through the wheel of a bicycle to secure the same in the stand, and also to provide the same with certain other 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 perspective of a lock embodying my invention; Fig. 2, an elevation of the same with the front plate removed; Fig. 3, an enlarged sectional detail on the line 3 3 of Fig. 2, and Fig. 4 a plan view of the flat key to operate the lock.

Like letters refer to like parts in all of the figures.

A represents a suitable casing having a detachable side A' and adapted to be secured in a bicycle-stand adjacent to the space in which the bicycle-wheel is inserted.

B is a bolt sliding in an opening in the case near one end and in a guide-block C near the other end, and adapted to extend from the case far enough to pass across said space and through the bicycle-wheel and enter a suitable opening at the other side of said space, and thus effectually secure the wheel in the stand. To effect this extended movement of the bolt and to operate the same by means of an ordinary key, I provide said bolt with a pin D in its side, with which is engaged the slotted end of a lever E, said lever having its other end pivoted to the case at E'. To said lever and near the pivot E' is pivoted one end of a connecting-rod F, which rod terminates at its other end in a strap G, which strap surrounds an eccentric I, attached to a rotative plug

H, journaled in the case A and projecting through the same and provided with a key-slot H', adapted to receive a flat key M, provided with a series of projections O to disengage the tumblers from the slot H', and an incline P to move said tumblers outward. Wards K, supported in place by pins Q, engage grooves in the plug H and are provided with nicks K' to permit the projections O of the key to pass.

J is a spring-actuated tumbler to engage the key-slot H' and prevent the plug from turning.

The number and arrangement of the wards and tumblers may be varied and the keys varied accordingly, each key having a projection O to lift each tumbler and spaces between the projections O, corresponding to the wards of the respective lock that it is designed to operate.

L is a lug to engage and stop the descent of the connecting-rod F, and D' a stop-pin to engage the case and stop the bolt when the latter is fully projected from the case. An opening N in the case permits the projections O to pass when the device is in locked position, and when unlocked the key is retained by the engagement of said projections with the inner side of the casing. When the device is locked, the tumblers J engage the slot H' and hold the plug from turning, and the full side of the eccentric is slightly below a line drawn from the center of the plug to the pivot connecting the rod F to the lever E. Thus any force applied to push the bolt B back tends to press the rod F down upon the lug L and does not bind or strain the tumblers.

By connecting the eccentric near the pivot of the lever E the end of said lever is moved far enough to throw the long bolt B with but moderate movement of the rod F. I am thus able to use a locking mechanism proper having a short throw to operate a bolt having an extended throw.

I am aware that a bolt connected to a key-operated locking mechanism by a pivoted lever and a slotted connecting-rod whereby said bolt is moved a moderate distance only and during a portion of the lock movement is old. I do not claim such broadly.

Having thus fully described my invention,



what I claim, and wish to secure by Letters Patent, is—

1. In a lock, a rotative, key-operated plug and tumblers engaging the same, an eccentric mounted on said plug, a longitudinally-movable bolt, a strap surrounding said eccentric, a rod connected to said strap and operating the bolt and a lug engaging said rod and limiting its movement, substantially as described.

2. In a lock for bicycle-stands a bolt having an extended movement to pass through a bicycle-wheel, a lever pivoted at one end and having its other end connected to said bolt,

a rotative key-operated plug, tumblers engaging the key-slot of the plug, an eccentric mounted on the plug and rotating therewith, a rod extending from the eccentric and connected to the lever near its pivot, and a lug engaging said rod to limit its movement and take the strain off the tumblers substantially as described.

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

DOW B. AUSTIN.

Witnesses:

LUTHER V. MOULTON,  
LEWIS E. FLANDERS.