

(No Model.)

A. W. NUTZ.
LOCK FOR BICYCLES.

No. 565,782.

Patented Aug. 11, 1896.

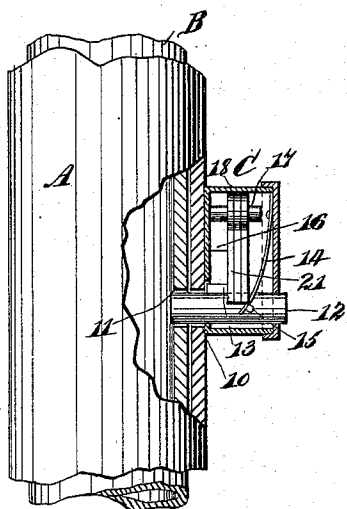


Fig. 1

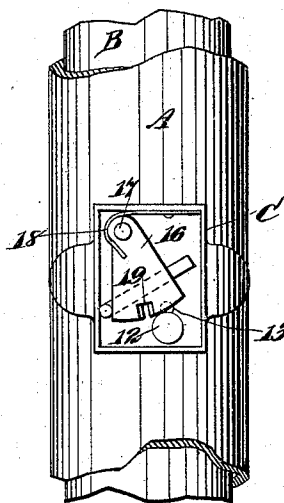


Fig. 2

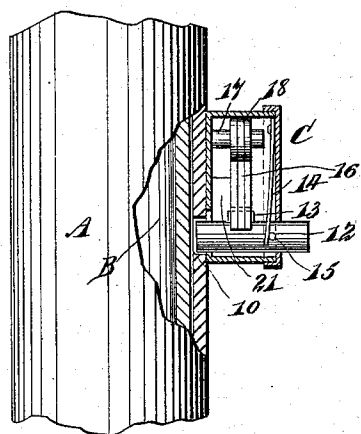


Fig. 3

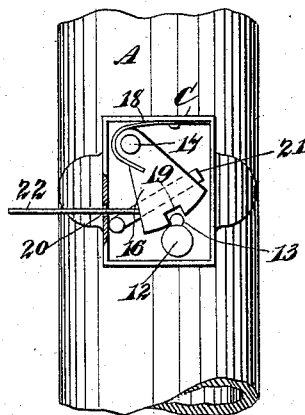


Fig. 4

WITNESSES:

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ALBERT WOLFORD NUTZ, OF WALLACE, KANSAS.

LOCK FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 565,782, dated August 11, 1896.

Application filed October 18, 1895. Serial No. 566,098. (No model.)

To all whom it may concern:

Be it known that I, ALBERT WOLFORD NUTZ, of Wallace, in the county of Wallace and State of Kansas, have invented a new and Improved Lock for Bicycles and Like Vehicles, of which the following is a full, clear, and exact description.

My invention relates to the construction of locks for bicycles of that character which will lock the handle-bar in any desired position in the head, thus preventing the wheel from being used until the handle-bar is released.

The object of this invention is to provide a lock which will be constructed of but few parts, and will be strong and economic and quickly brought into locking engagement with the handle-bar, and also to so construct the lock that it will be key-operated.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a portion of a bicycle-head and handle-bar, illustrating the lock in section and the bolt in locking position. Fig. 2 is a front elevation of the bicycle-head and handle-bar, the front plate being removed and the bolt being also in locking position. Fig. 3 is a view similar to Fig. 1, the bolt being in unlocking position; and Fig. 4 is a view similar to Fig. 2, the bolt being also here shown in its unlocking position.

In the drawings the lock is shown as applied to a bicycle, the lock being secured in any suitable or approved manner to the head A of the bicycle-frame, which head is provided with an opening 10 at the back of the lock, and the handle-bar B is provided with one or more openings 11, circumferentially arranged, and either of them adapted to register with the opening in the head.

The casing C of the lock may be of any desired shape. Preferably, however, it is somewhat rectangular and is bolted, riveted, or otherwise secured to the head A. A bolt 12 is held to slide through the casing from front to back and enter the opening 10 in the head of the bicycle. This bolt has a rib 13 formed

upon its upper surface between its ends, the rib being preferably semicylindrical and the bolt of cylindrical form. The bolt is normally held in such position that it will extend some distance beyond the front of the casing, its inner end being in the aforesaid head-opening 10, by means of a spring 14, secured within the casing at the front and preferably made to bear against a pin 15, located in one side of the bolt, as is best shown in Figs. 1 and 3. One or more, usually three, tumblers 16 are employed, and these tumblers are preferably of triangular form, having their lower wider ends convexed, and the tumblers are fulcrumed at their contracted ends upon a post 17, secured within the casing at or near the top, and the tumblers are each provided with a spring 18, or one spring may control all the tumblers, if desired, the spring or springs being adapted to hold the tumblers in such position that their centers will be at one side of the bolt 12, as shown in Fig. 2.

At the central portion of each tumbler a recess 19 is made in its rounded or bottom end, and these recesses are adapted to register, and the tumblers are so placed upon the post 17 that when the bolt 12 is pushed inwardly sufficiently to enter an opening in the handle-bar B the rib of the bolt will be at the rear of and will bear against the rear face of the rear tumbler of the set, as shown in Figs. 1 and 2.

A key-slot 20 is made in that side of the casing in the direction in which the tumblers are forced by their springs 18, and a guide 21 is secured within the casing, extending from the bottom portion of the keyhole in an upward direction between the opposite sides of the casing, as shown in Figs. 2 and 4.

In the operation of the lock, when the handle-bar is locked to the head, as shown in Figs. 1 and 2, to release the handle-bar a key 22 is introduced into the keyhole 20 and will engage with the side edges of the tumblers, the key being made with bits fitted to receive the edges of the tumblers. By pressing the key inward until the recesses 19 are in alignment with the rib on the bolt 12 the spring 14 will act to force the bolt outward to its normal position, the rib finding a free passage through the aforesaid tumbler-recesses, as shown in Fig. 4.

When it is desired to lock the head to the handle-bar, the latter having been placed in proper position, the bolt is simply pressed inward, since its rib in the normal position of the bolt does not leave the recesses in the tumblers, and when the bolt has been pressed in sufficiently far to enter an opening in the handle-bar the rib will be at the back of the rearmost tumbler and the spring of the tumblers will carry their recessed portions past the rib of the bolt, causing the latter to bear firmly against the rearmost tumbler, thus insuring a safe lock until a key is resorted to in order to open it.

15 A dummy keyhole may be made in the front of the lock over the bolt if in practice it is found desirable.

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

The combination with a casing having transversely-alined openings and having an opening in its edge, of a bolt movable through the transversely-alined openings and having a projection thereon, a plurality of tumblers 25 mounted on a common axis, the axis being parallel with the bolt, the tumblers each having a notch formed in their free portions, said notches being capable of alinement to permit the projection on the bolt to pass, and springs 30 for pressing the bolt and tumblers, the opening in the edge of the casing being adapted to permit the insertion of a key whereby the key may engage the edges of the tumblers to actuate the same, substantially as described. 35

ALBERT WOLFORD NUTZ.

Witnesses:

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C. A. SMITH.