

(No Model.)

W. SLINGERLAND.
BICYCLE LOCK.

No. 601,047.

Patented Mar. 22, 1898.

FIG. 1.

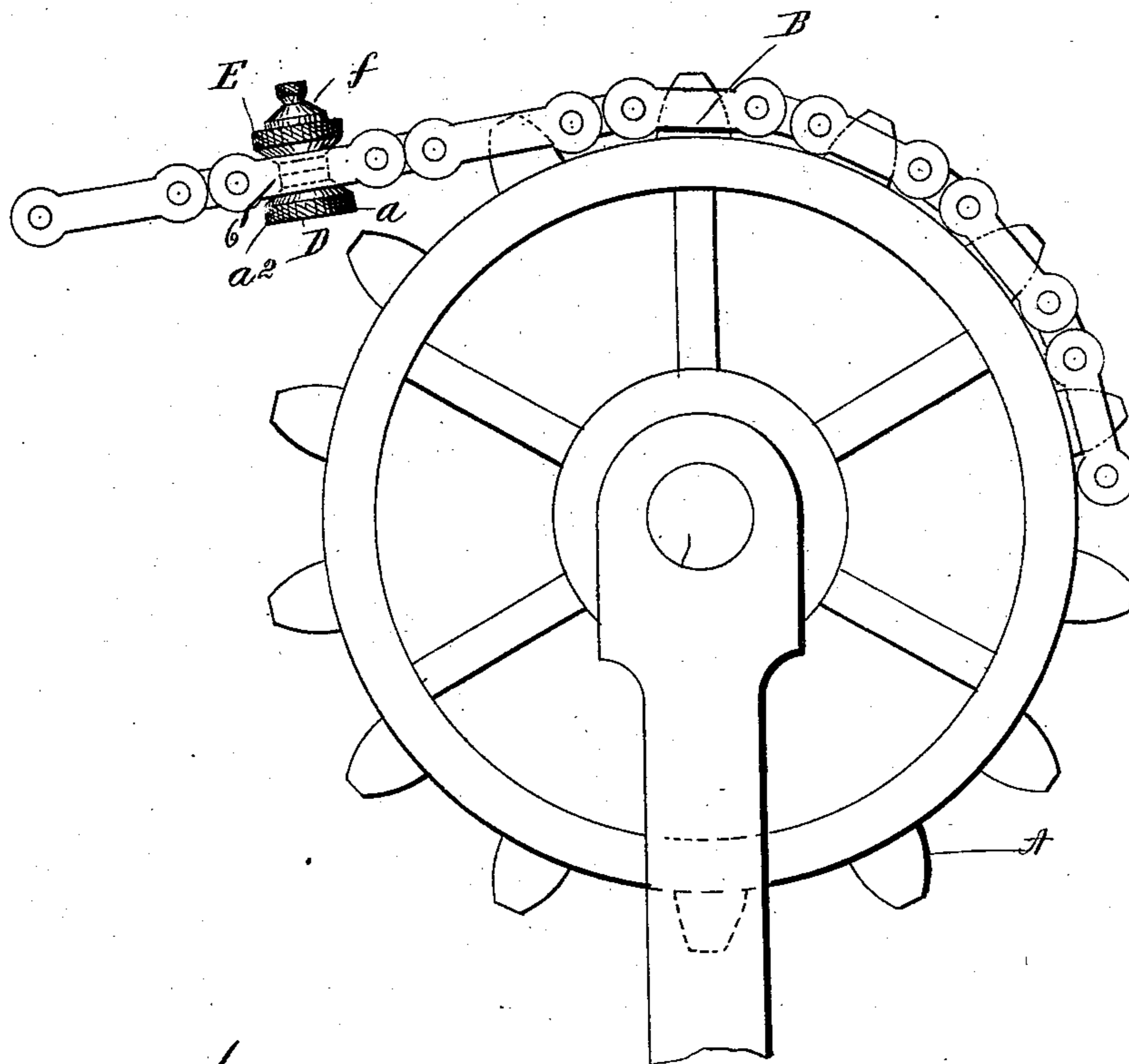


FIG. 2.

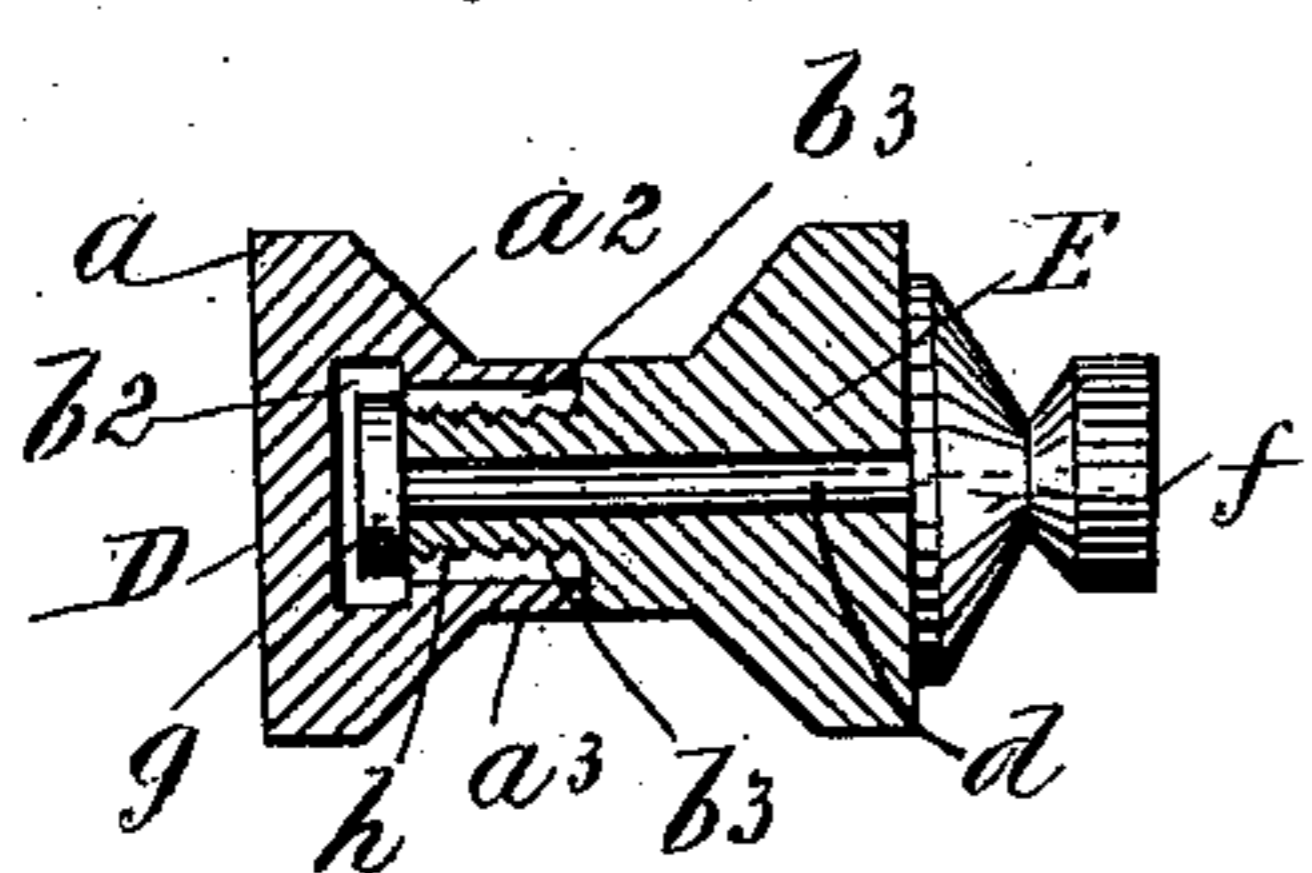


FIG. 3.

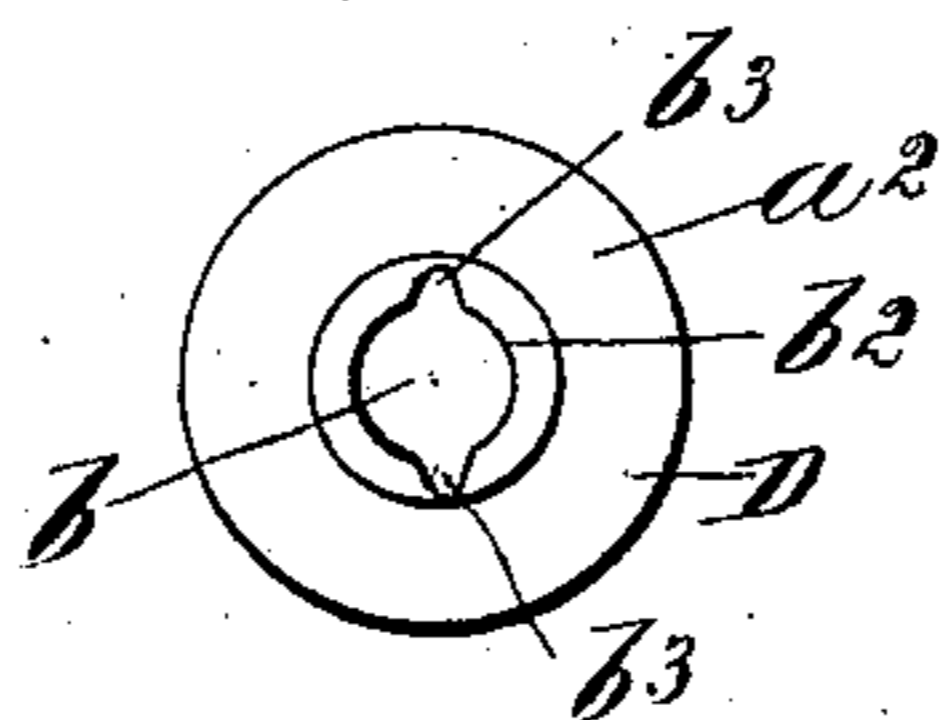


FIG. 4.

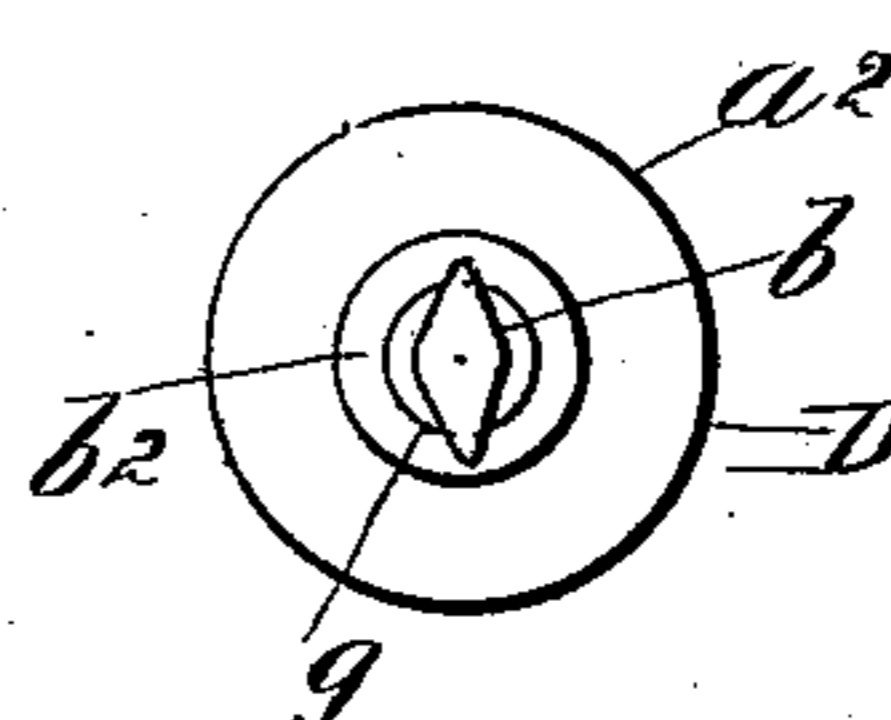
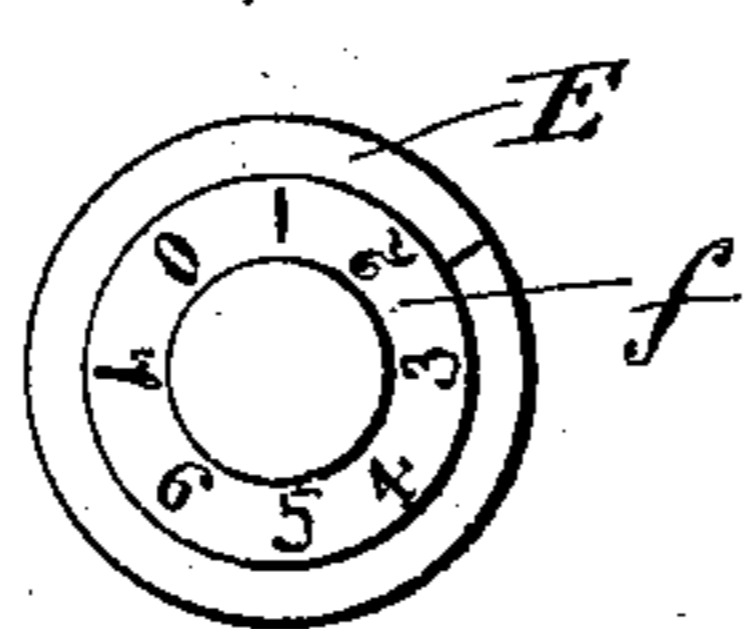


FIG. 5.



WITNESSES:

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WILLIAM SLINGERLAND, OF JAMESTOWN, NEW YORK.

BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 601,047, dated March 22, 1898.

Application filed August 25, 1897. Serial No. 649,479. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SLINGERLAND, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Bicycle-Locks, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bicycle-locks, and more particularly to a class thereof which is designed to be applied to the sprocket-chain.

The object of my invention is to provide a lock of the above-described class which can be attached to the chain in such a manner as will interfere with the rotation of the sprocket-wheel and which can be permanently retained in this position until removed by some person who may be familiar with the combination of said lock.

A further object is to provide a lock which is simple in construction, effective in operation, and inexpensive to manufacture.

The invention consists in the novel features of construction hereinafter described, and more particularly pointed out in the claims hereto appended.

Referring to the drawings, Figure 1 is a view of a sprocket-wheel, showing a section of the chain and my improved lock applied thereto. Fig. 2 is a view of said lock detached from said chain and partly in section. Fig. 3 is a plan view of the bottom portion of said lock. Fig. 4 is a view looking upward on the line 4 4 of Fig. 2, and Fig. 5 is a plan view of said lock.

Like letters and numerals of reference refer to like parts throughout the several views.

Referring to the accompanying drawings, which form a part of this specification, the letter A denotes the sprocket-wheel attached to the pedal-axle of an ordinary wheel, and B denotes an ordinary sprocket-chain. To more fully understand my invention, it would be advisable to insert a brief description of this chain. The ordinary chain as now in use is comprised of two side plates, as 6, which with a solid plate pivoted between its ends form one link of the chain. These plates are so riveted together as not to be readily detached, and are made of sufficiently-strong

metal to require even a most extraordinary effort to break the same.

My improved lock is composed of two detachable parts—a lower part D and an upper part E. The lower part D is comprised of a cylindrical base a , a conical section, as a^2 , and a small cylindrical extension a^3 . In this lower part is situated a screw-threaded cavity b , extending vertically part way therethrough and having at its lower extremity an enlarged portion b^2 , the upper sides of which extend at right angles, or approximately so, to the vertical cavity b .

The upper portion E of the lock has extending therethrough a cylindrical cavity which is adapted to receive a rod d , attached at one end to a disk f and having centrally mounted on its other end a diamond-shaped plate g , the sharp points of which form two lugs adapted to slide within slots b^3 in the cavity b , as shown in Fig. 3. Made integrally with or firmly attached to this upper section is a screw h , which is adapted to operate in the screw-thread in the cavity b . These slots b^3 extend beyond the greatest diameter of any portion of the cavity b , so that when in these slots the plate d will be incapable of revolving. The upper portion E is exteriorly shaped similarly to the lower part, so that the small cylindrical portion of a diameter equal to that of the bottom portion at a^3 will fit properly between the plates of the sprocket-chain.

The disk f , by reason of the cylindrical cavity and rod d^2 , readily revolves when the plate g is free of the slots b^3 , as in the cavity b^2 . This disk is provided with a series of characters which are designed to be brought in a certain relation with the top of the upper portion d , in order that the lugs on the plate g may be so brought in relation to the cavity in which it rests as to be capable of being withdrawn therefrom. The slots b^3 facilitate this withdrawal.

In operation my improved lock acts as follows: The upper and lower portions are placed one on each side of the chain and then united between the plates 6 6 of one link of the said chain by means of the screw-thread in the cavity b and the screw h , made integrally with or firmly attached to the top portion E, the lugs on the plate g having been inserted in the slots b^3 . When said portions have

been united as above described, the disk *f* is turned, thus bringing the lugs on the plate *g* into contact with the upper portion of the cavity *b*², securely locking said device, and
 5 prevent its being removed except by a person who is thoroughly familiar with the necessary relative location of the characters on the disk *f*, and an indicator-point on the top of the portion *E*. The enlarged bases of the respec-
 10 tive portions of the device maintain the lock in this relation to the chain until by a reversal of the operation above described a separation of said parts is accomplished.

By the construction above described it will
 15 be impossible for a person by a sense of touch to inform himself when the plate *g* is in its proper relation. When the upper portion *E* is screwed down to the fullest extent, this disk will revolve entirely free of the upper
 20 portion of this cavity, and if the upper portion is slightly unscrewed it is so bound against the disk as to prevent the rotation of the latter.

By the above-described means it will read-
 25 ily be observed that the objects of my invention are attained. A lock as above described is cheap in construction and will prevent the sprocket-wheel from being rotated while it is attached to the chain and is removable only
 30 by a party who is familiar with the necessary position of the various parts in order to unscrew the upper and lower portions.

Having fully described my invention, what I claim, and desire to have protected by Let-
 35 ters Patent, is—

1. In a bicycle-lock, the combination of two parts united by means of a screw-thread, and a lock whereby the separation of said parts is rendered impossible except when said lock
 40 is in a previously-arranged relation with reference to said screw-threaded parts, said parts respectively being provided with means whereby said parts are maintained in the proper relation to the object to which the lock
 45 is applied, substantially as shown and described.

2. In a bicycle-lock, two parts provided re-

spectively with a screw-threaded cavity, and a screw-thread to operate in said cavity, ver-
 tical slots in said cavity adapted to receive a
 50 lug on a revoluble plate firmly attached to the screw bearing portion, said lug being adapted to come in contact with the lower edge of said screw-threaded cavity whereby said parts are
 55 locked, said parts respectively being provided with means whereby said parts are main-
 tained in the proper relation to the object to which the lock is applied, substantially as shown and described.

3. In a bicycle-lock, two parts, provided re-
 60 spectively with a screw-threaded cavity, and a screw adapted to operate in said cavity, ver-
 tical slots in said cavity adapted to receive lugs on a revoluble plate attached to the screw
 65 bearing portion by means of a rod attached to the revoluble disk at the top thereof, said parts respectively being provided with means
 whereby said parts are maintained in the proper relation to the object to which the lock
 70 is applied, substantially as shown and de-
 scribed.

4. In a bicycle-lock, two parts provided re-
 spectively with a screw-threaded cavity, and a screw-thread adapted to operate in said cav-
 ity, vertical slots in said cavity adapted to
 75 receive lugs on a revoluble plate, a revoluble disk provided with a series of characters, and a connection between said plate and said disk, and an indicated point on said lock whereby
 by means of the lugs on said plate the parts
 80 may be brought to a certain prearranged relation, said parts respectively being provided with an abutment, whereby said parts are
 maintained in the proper relation to the ob-
 85 ject to which the lock is applied, substan-
 tially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 21st day of August, 1897.

WILLIAM SLINGERLAND.

Witnesses:

L. W. WILTSIE,
 WILLIAM BOYD.