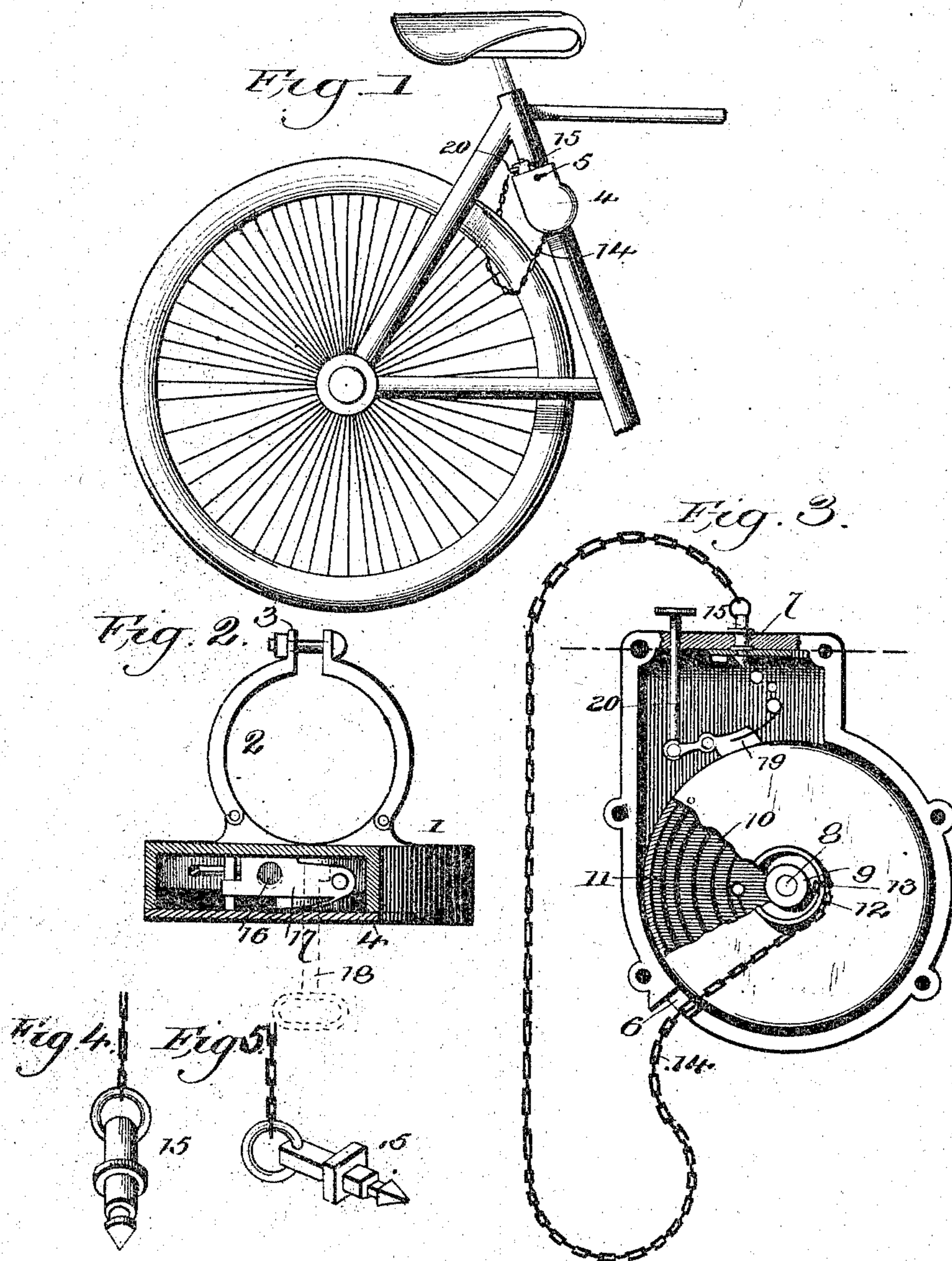


(No Model.)

C. C. FREE & N. F. HEATH  
BICYCLE LOCK.

No. 527,418.

Patented Oct. 16, 1894



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 527,418, dated October 16, 1894.

Application filed December 29, 1893. Serial No. 495,153. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES C. FREE and NED F. HEATH, citizens of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Bicycle-Locks; and we 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.

This invention relates to bicycle locks, and has for its object to provide means for securing one or both wheels of a bicycle against movement, of the chain wheel, or any part of the running gear, or movement mechanism which is contributory to the movement of the machine.

With these and other objects in view, the invention consists of the construction and arrangement of the several parts which will be more fully hereinafter described and claimed.

In the drawings: Figure 1 is a side elevation of a portion of a bicycle, showing the improved lock applied thereto in one of different ways in which it can be applied. Fig. 2 is a top sectional plan view. Fig. 3 is a front or face sectional view. Fig. 4 is a detail perspective view of a portion of the locking chain and a round head carried thereby. Fig. 5 is a similar view of a portion of a chain and a square head carried thereby.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

Referring to the drawings, the numeral 1 designates a casing having at the back thereof a pair of hinged clamping jaws 2 with oppositely disposed lips 3 at their terminating ends adapted to be engaged by a bolt, rivet or other fastening device to secure the said clamping arms over a portion of the frame. It will be understood that these clamping arms can be made in any suitable form to conform to the contour of the part of the frame to which they are to be applied and are hinged in order that they may be readily placed in position without being drawn over any great length of the part to which they are to be attached. The casing 1 has a removable face plate 4 with the key-hole 5 in

the upper part thereof, and at the bottom, of one side of the said casing is a chain slot 6, while at the top of the casing is a round or angular opening 7. Within the casing is located a stud 8 on which is mounted a rotatable chain pulley 9 having a spring chamber 10 in the rear thereof, to receive a spring 11, one end of which is secured to the said pulley and the other end to the rear of the casing. The chain pulley is also formed with a central collar 12 separate from the hub having a slot in one side thereof as at 13 for the insertion of the inner end of a chain 14 adapted to pass out of the chain slot in the lower portion of the casing heretofore referred to and having thereon either a round or an angular or a square head 15, as fully shown in the accompanying drawings, the said head 15 being larger in diameter than the chain slot and preventing the entire ingress of the chain within the casing. The said chain is employed to lock the parts of the bicycle or analogous machine against movement and when it is desired to use the same, it is drawn outward from the casing and causes a rotation of the chain pulley and a winding action of the spring, and after the chain has been drawn out and caused to engage the movable part of the bicycle or other machine which it is adapted to lock, the round or square head of the free end of the chain is caused to engage the slot in the upper end of the casing and passes through a similar opening 16 in a spring actuated latch 17 which engages the groove in the head and holds the same fast in the casing. When it is desired to release the head from the latch, a key 18 is inserted in the key-hole in the face plate, and by turning the said key, the latch is operated to bring the opening therein in such position as to permit the head to be withdrawn, it being understood, that the opening in the latch is larger than the head and that the spring action of said latch causes the wall of the opening to engage the groove in the head and lock the same against withdrawal, until released by the key as stated.

The chain pulley heretofore described is a frictional pulley, and the edge thereof is engaged by a frictional brake pawl 19, which is spring actuated and normally in engagement

with the periphery of the said pulley. This brake pawl is fulcrumed at a suitable point and has an end projecting beyond its fulcrum to which is attached the inner end of  
5 a push rod 20 having a suitable head on the outer end. When it is desired to release the chain from a securing position and store it within the casing of the lock, the push rod 20 is operated to release the brake pawl and  
10 permit the chain pulley to operate through the medium of the spring and to wind the chain thereon automatically, and thereby store said chain within the casing.

While the lock has been shown applied to  
15 a bicycle, it will be understood that it can be used as readily upon a tricycle or any other class of machinery or vehicle, and that it may be permanently attached to the frame if desired.

20 It will be obviously apparent that changes in the proportion, form and minor details of construction can be made and substituted for those shown and described, without in the

least departing from the nature or spirit of the invention.

Having thus described the invention, what is claimed as new is—

In a lock of the character described, the combination of a spring actuated chain pulley, a chain in connection therewith and  
30 adapted to be wound thereon and having a head on the free end thereof, a lock for engaging the said head, and a frictional device consisting of a spring actuated pawl having a push rod attached to one end thereof and  
35 extending through the casing of the lock, substantially as and for the purposes specified.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

CHARLES C. FREE.  
NED F. HEATH.

Witnesses:

WILLIAM TREDER,  
C. PETER SCHULTZ.