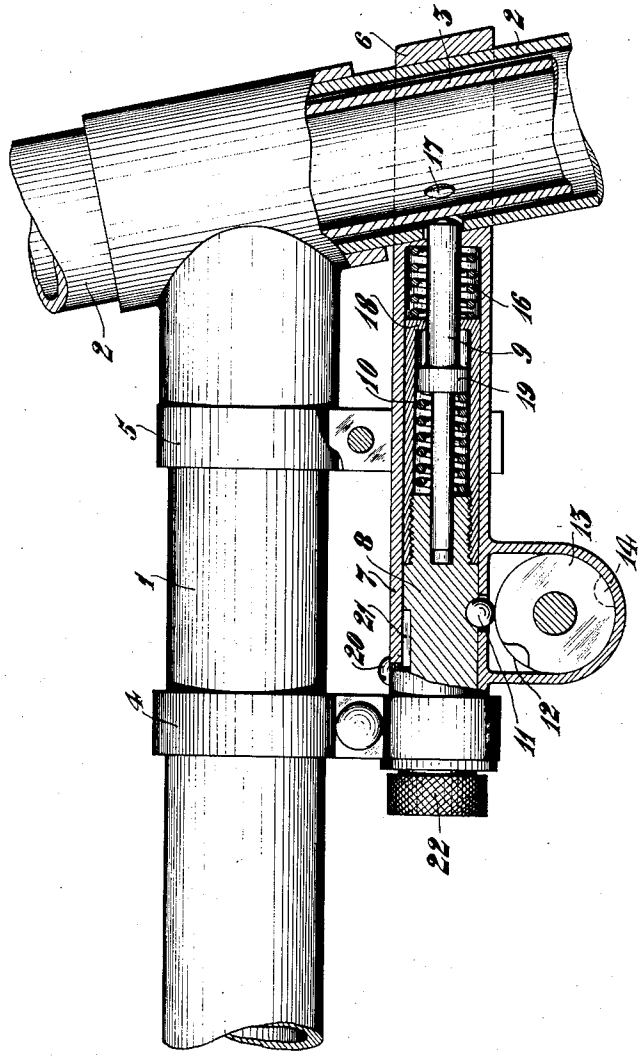
J. H. VAN VIERSEN.

BICYCLE LOCK.

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1,343,856.

Patented June 15, 1920.



Inventor

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BICYCLE-LOCK.

1,343,856. Specification of Letters Patent. Patented June 15, 1920.

Application filed February 20, 1920. Serial No. 360,197.

To all whom it may concern:

Be it known that I, JACOB HENDRIK VAN VIERSEN, electrician, a subject of the Queen of the Netherlands, residing at the Hague, Netherlands, Valkenboschlaan 112, have invented certain new and useful Improvements in Bicycle-Locks, of which the following is a specification.

The invention consists of a bicycle-lock, which has the peculiarity, that, when placed in the closed position, it does not lock the bicycle, until this is started off, so that it is possible to catch the thieves. For this purpose the lock contains a latch wherein a pin can be shoved in and out under the influence of a spring. When the latch is moved to the front and closed in, the pin with compressed spring presses against a movable part of the bicycle, preferably the crown-tube; however the pin does not move forward until the hole drilled in the part in question comes in line with the pin, on account of the moving of the bicycle. The pin, which cannot be reached from the outside, cannot be retracted, until the latch is unlocked.

The drawing shows a construction of the lock executed in accordance with the invention.

On the drawing, 1 signifies the upper-frame-tube, 2 the outside and 3 the inner-crown tube.

The lock casing 7 is fastened to the upper-frame-tube, resp. to the crown with straps 4, 5 and 6. It contains a latch 8, which can be shoved in and out of the lock and inside of the latch there is a locking-pin 9, which can be shoved in and out and which is pushed out to the right by spring 10. The latch preferably consists of two detachably connected cylindrical sections one of which is solid while the other is hollow, the solid section being provided at its end adjacent the hollow or tubular section with an inwardly extending recess which accommodates the pin 9. The spring 10 is accommodated within the hollow section and bears against the section 9 and is tensioned against the pin so as to normally hold the same in an extended position.

On the drawing latch 8 is shown in its utmost right-hand position in which it is locked by ball 11, which rests on the edges of two parallel circular plates 12 and 13. Each of these plates has a recess 14 which, together, form a cup, in which ball 11 can drop, when the plates 12 and 13 are placed in the right position.

Latch 8 can be brought in its utmost forward position against the pressure of spring 16 which is housed in the casing 7 between the inner end of the casing and the adjacent end of the hollow section of the latch and can be locked in that position by means of ball 11. The locking pin 9 then rests against the inner-tube of the crown and spring 10 is compressed. As soon as, through steering of the bicycle, the hole 17 in the inner-tube comes in line with the locking pin, spring 10 forces this pin in the hole, locking the two crown-tubes together thereby making it impossible to guide the bicycle. Locking pin 9, which cannot be reached from the outside, can only be retracted together with latch 8, after ball 11 has dropped into the cup of the plates 12 and 13. The inner flange 18 of the latch then takes the locking pin along by means of the collar 19.

The backward motion of latch 8 is limited by screw 20, which runs in a slot 21. Knob 22 serves as a handle for the latch, where it protrudes outside of the lock.

It is clear that the ball-locking device is not essential for the invention; the locking of the latch can be obtained by any other suitable lock.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a bicycle-lock in combination with the upper tube and inner and outer relatively rotatable crown tubes of the frame of a bicycle, the crown tubes being provided with registrable openings, of a casing attached to the frame and positioned beneath the upper tube and at substantial right angles to the crown tube, a latch slidably mounted in the casing and including a sectional body and a slidably mounted spring pressed pin in the body and normally held in an extended position for engagement with the openings in the outer crown tube when the latch is extended so as to bear against the inner crown tube and automatically engage the opening therein upon the turning of the inner crown tube until the opening therein registers with the opening in the outer tube, a spring arranged within the casing and about the outer portion of the pin and bearing against the inner end of the casing and the latch for normally

holding the latch in a retracted position and means for locking the latch in an extended position.

2. In a bicycle-lock in combination with the upper tube and the inner and outer crown tubes of the frame of a bicycle, the crown tubes being provided with registrable openings of a casing fastened to the upper tube and the outer crown tube, a latch slidably mounted in the casing including a solid cylindrical section and a hollow cylindrical section connected thereto, a pin slidably accommodated in the sections and projecting outwardly of the hollow section, and a spring arranged within the hollow section and tensioned against the solid section and the pin to normally force the pin outwardly so that when the latch is extended the pin will pass through the opening in the outer crown tube and bear against the inner crown tube, resilient means arranged within the casing and tensioned against the inner end of the casing and the adjacent end of the hollow section for normally holding the latch in a retracted position, means for limiting the retracting movement in the latch, means for extending the latch, and means for locking the latch when extended.

3. In a bicycle-lock in combination with the upper tube and the inner and outer crown tubes of the frame of a bicycle, the crown tubes being provided with registrable openings, of a casing attached to the outer crown tube and the upper tube and parallel beneath the upper tube, a latch slidably mounted in the casing and including a solid section provided with a longitudinal groove in its outer surface and also provided with an inwardly extending recess in its inner end, a tubular section detachably connected to one end of the solid section and terminating at its opposite end in a flange, a pin slidably mounted through the flange and in the recess at the end of the solid section, a collar formed on the pin, a spring arranged within the tubular section and tensioned against the collar and the adjacent end of the solid section so as to normally hold the pin extended for the consequential automatic engagement of the pin with the openings in the crown tubes when the latter are registered and when the latch is extended, resilient means in the casing tensioned to hold the latch in a retracted position, a knob for facilitating the extension of the latch means for locking the latch when extended, and a screw mounted in the casing and engageable with the groove for limiting the retracting movement of the latch.

In testimony whereof I affix my signature.

JACOB HENDRIK VAN VIERSEN.