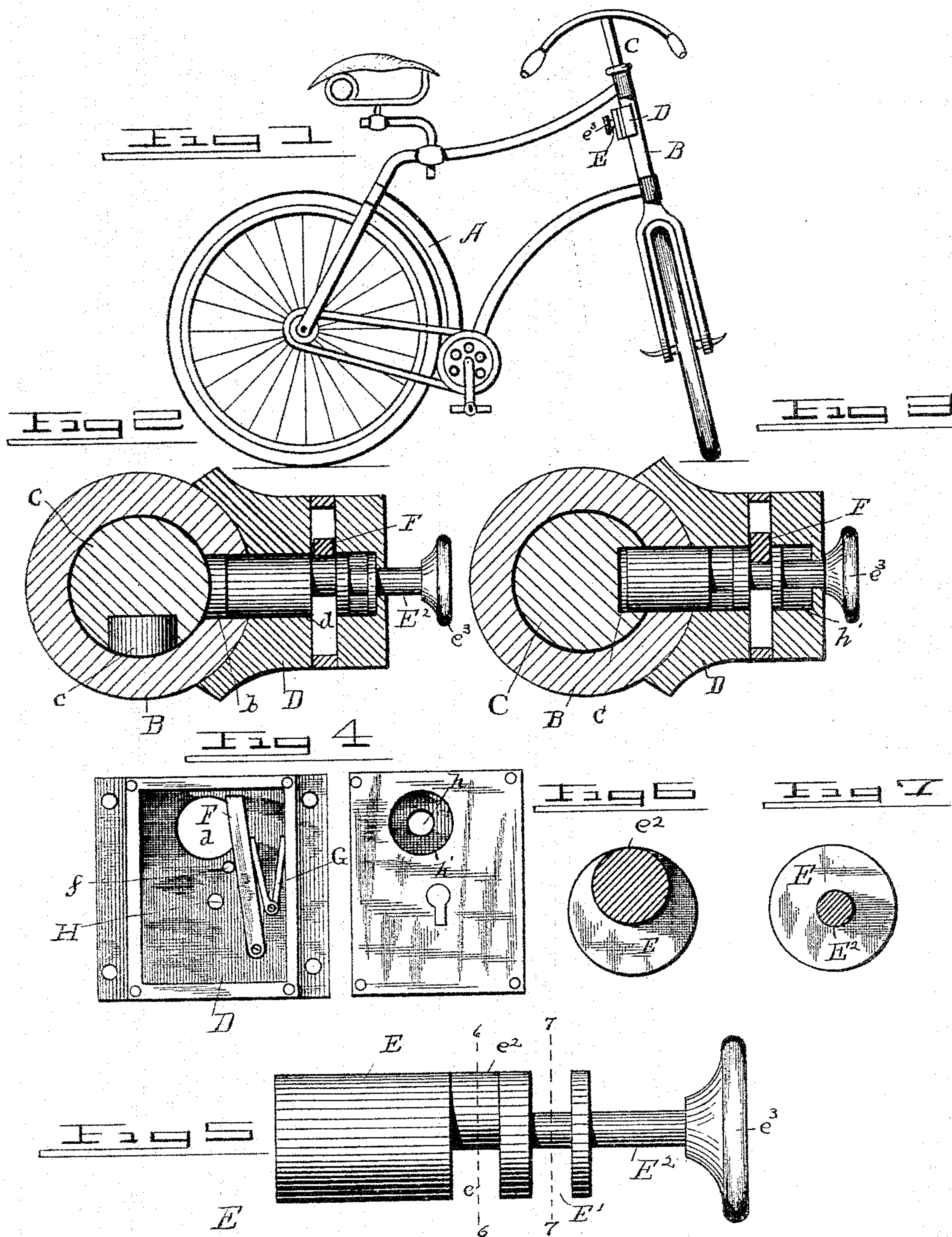


(No Model.)

E. BUYSSE.
BICYCLE LOCK.

No. 491,335.

Patented Feb. 7, 1893.



WITNESSES
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BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 491,335, dated February 7, 1893.

Application filed August 12, 1892. Serial No. 442,929. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BUYSSE, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Bicycle-Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention is an improvement in locks for bicycles; and its object is to provide a permanently attached device which will prevent anyone using the bicycle satisfactorily if at all, when it is locked, and which can be locked at any time by the simple turning of a bolt, and yet cannot be unlocked without the use of a key.

The lock has no direct connection with either wheel of the machine and leaves them free to revolve, thereby preventing any injury to the spokes or tires thereof, such as might be occasioned by the ordinary means and methods of locking such machines, and yet thereby the machine can be disabled so that it cannot be ridden for any distance.

The invention consists in the novel construction of the lock as will be clearly understood from the following description and claims.

Referring to the drawings by letters marked thereon, Figure 1 is a side view of a bicycle having my lock attached, and locked. Figs. 2 and 3 are enlarged detail sectional views illustrating the parts locked and unlocked respectively. Fig. 4 is a detail view of the lock casing, with top and bolt removed. Fig. 5 is a detail view of the bolt detached, and Figs. 6 and 7 are transverse sections through the bolt on lines 6—6 and 7—7 respectively of Fig. 5.

A represents an ordinary bicycle.

B is the sleeve through which passes the shank C of the guide wheel fork, to which shank the handle bars or steering levers are attached. The lock case D is recessed to fit to the side of sleeve B and is secured thereon in any suitable manner.

E is the locking bolt playing through openings *d* and *b*, in the case and sleeve respectively, the inner end of said bolt being adapted to engage a socket *c* in shank C, and when so

engaged locks the shank so that the guide wheel cannot be turned in any direction until the bolt is disengaged. A locking tumbler F is pivoted in case D beside opening *d* and pressed toward bolt E by a spring G.

f is a stop for limiting the movement of said tumbler, should the bolt be withdrawn. This tumbler is adapted to engage with one of two annular grooves *E'* or *e'* in bolt E. Groove *E'* is outermost and is engaged by the tumbler when the bolt has entered socket *c*, and then the wheel is locked although the bolt can be revolved indefinitely, the tumbler can however be released by means of a key, inserted through an opening in the cover of the case, which may be centered on a pin H. When the bolt is drawn out the tumbler engages groove *e'* and prevents it being pushed inward to engage the socket. However said groove does not extend entirely around the bolt, leaving a cam portion *e''*, which when the bolt is revolved will force the tumbler out of the groove until it rests on the apex of the cam, and if at this time the bolt is pushed inward, it can slide past the tumbler (and if the shank C is properly turned) into socket *c*, and lock the wheel, and the tumbler drops into groove *E'*, permanently locking the bolt until it is disengaged by means of a key as described.

The outer end of bolt E is reduced as at *E''* and passes through an opening *h* in the cover of the case, said opening being enlarged interiorly as at *h'* to permit the necessary reciprocatory movements of the bolt. A cap *e'''* on the outer extremity of the bolt facilitates its handling.

It will be at once understood that if the shank be locked the guide wheel cannot be turned, and therefore the wheel cannot be ridden, as it is necessary in riding bicycles that the guide wheel be easily turned right or left to enable the rider to maintain an equilibrium or upright position.

This lock is simple, always at hand, and can be readily applied by the owner without a key, and yet cannot be unlocked except by forcibly disengaging the tumbler. And while I have shown but one tumbler, more could be employed, making it the more difficult to unlock the bolt.

Having thus described my invention what

I claim as new and desire to secure by Letters Patent thereon is;—

1. In a bicycle the combination of the frame, sleeve, and fork journaled in said sleeve; 5
with the lock case attached to the sleeve, the longitudinally movable bolt therein, having an annular groove, adapted to engage a socket in the shank of the fork and lock the same, and a tumbler pivoted in the case adapted to 10
engage the groove of said bolt and lock it until released by a key, substantially as described.
2. The combination with the bicycle sleeve, and fork shank, of a reciprocating and rotary 15
bolt adapted to engage said fork shank through an opening in the sleeve and having an annular cammed groove, a tumbler adapted to engage said groove and prevent longitudinal movement of the bolt until it is partly 20
rotated and to lock the bolt after it engages the fork, substantially as and for the purpose specified.
3. The combination of the case, the sliding and revolving bolt having an annular groove 25
and a cammed groove, and a tumbler adapted to engage the annular groove when the bolt

is projected whereby the bolt is positively locked against longitudinal movement, but can rotate, and to engage the cammed groove when the bolt is retracted, substantially as 30
and for the purpose described.

4. In a bicycle the combination of the lock case attached to the fork sleeve, and a bolt in said case adapted to project through the sleeve and engage a socket in the fork shank 35
within the sleeve, said bolt having a projecting finger piece, a cammed groove and an annular groove substantially as described, with a spring controlled tumbler pivoted in the case and adapted to engage said cam groove 40
when the bolt is retracted and said annular groove when it is projected, and thereby positively lock the bolt, substantially as and for the purpose specified.

In testimony that I claim the foregoing as 45
my own I affix my signature in presence of two witnesses.

EDWARD BUYSSE.

Witnesses:

JAMES DUSHANE,
LOUIS BUYSSE.