No. 704,655. Patented July 15, 1902.

H. W. MORGAN.

BICYCLE LOCK.

(Application filed Aug. 1, 1901.)

(No Model.)

Fig. 1.

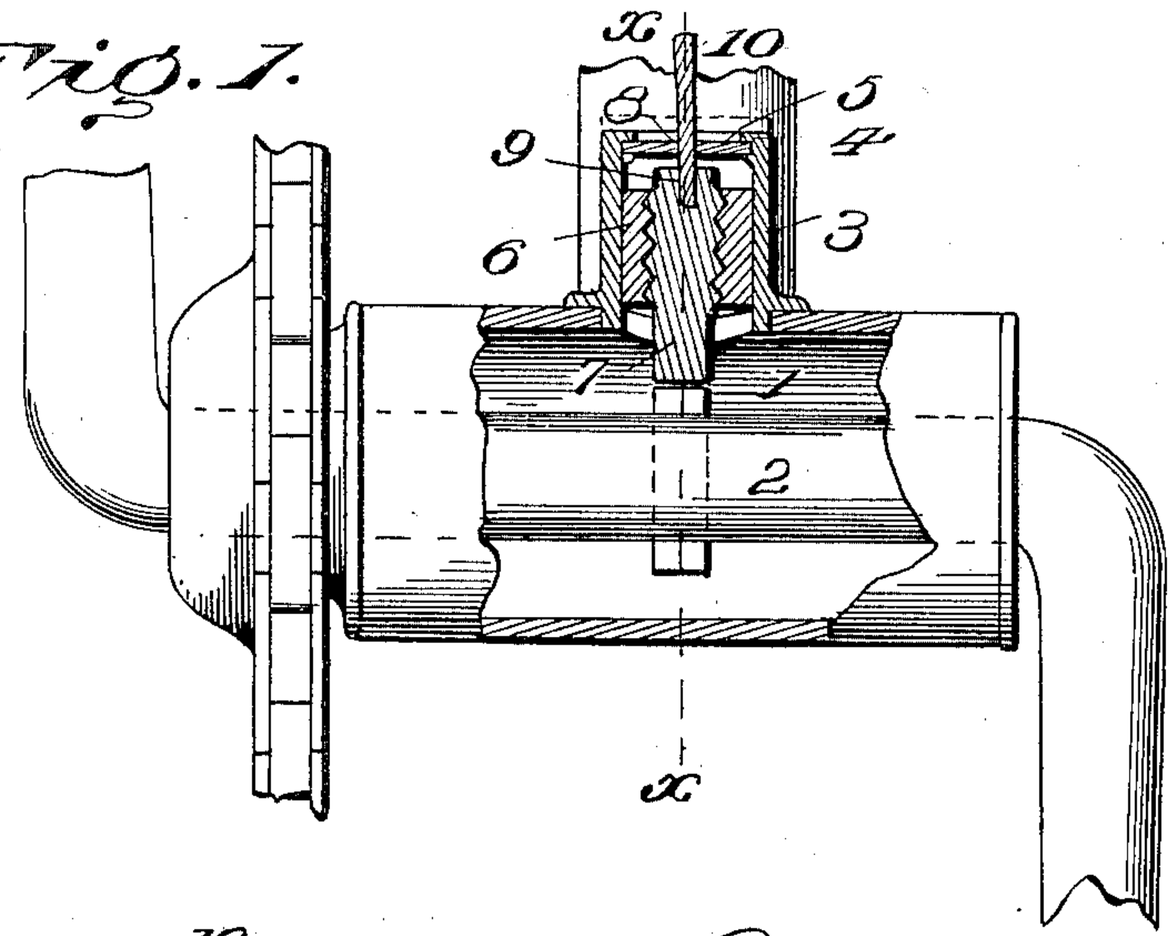


Fig. 2.

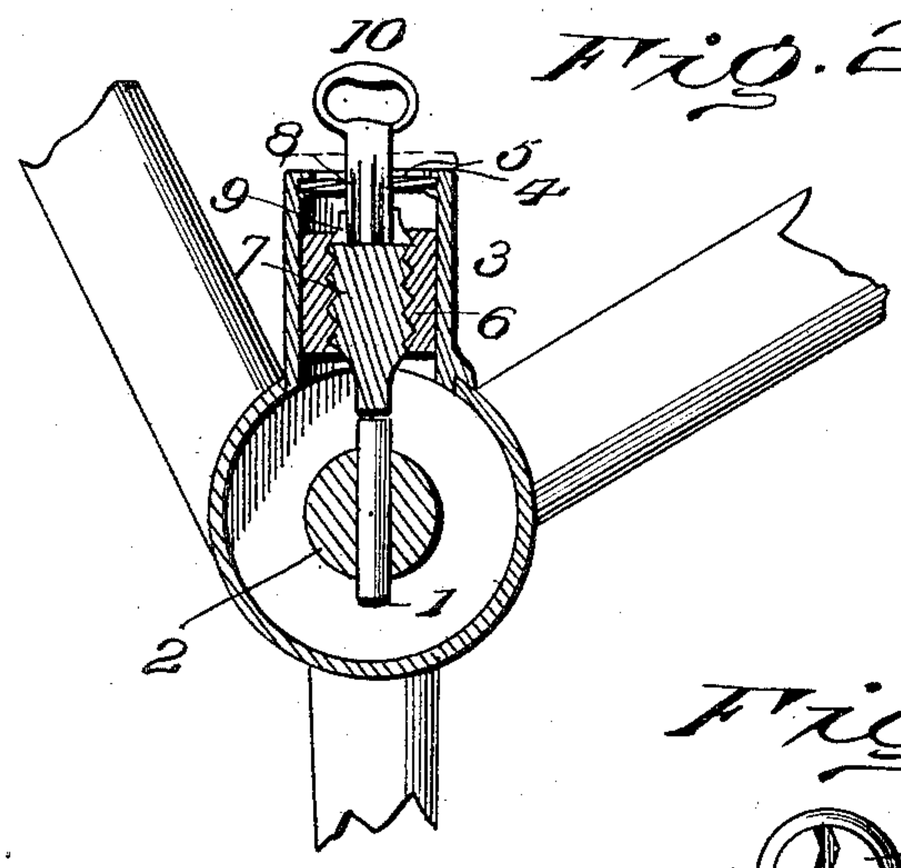


Fig. 3.

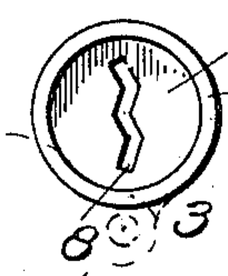


Fig. 4.

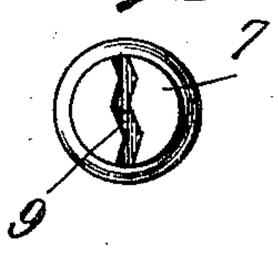
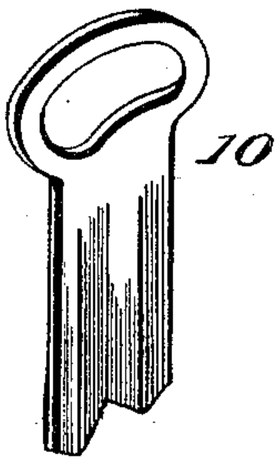


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY W. MORGAN, OF LESTERSHIRE, NEW YORK.

BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 704,655, dated July 15, 1902.

Application filed August 1, 1901. Serial No. 70,522. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. MORGAN, a subject of the King of England, residing at Lestershire, in the county of Broome and State of New York, have invented certain new and useful Improvements in Bicycle-Locks; and I 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 provides a simple, cheap, and effective means whereby one may lock a bicycle, velocipede, or like machine when left unattended, thereby preventing the unauthorized use of the machine and interposing a check to its pirating.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of the crank-hanger of a bicycle or velocipede, showing the application of the invention. Fig. 2 is a section thereof about on the line X X of Fig. 1. Fig. 3 is a front or end view of the lock. Fig. 4 is an end view of the lock-bolt. Fig. 5 is a detail view of the key.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

While the invention is specially designed for application to the crank-hanger, it is to be understood that it may be used in connection with any rotating part of the machine of which the crank-shaft is typical.

The offstanding part 1 is applied to the crank-shaft 2 and, as shown, consists of a pin passed through an opening formed through the crank-shaft. The casing 3 for inclosing the operating parts of the lock is rigidly attached to the crank-hanger 4 in the plane of the offstanding part 1, and its outer end has a portion inturned, as shown at 4, to overlap the plate 5 and hold it in place. A tube 6 is located within the casing 3 and may be attached thereto or to the crank-hanger 4, or it may be loosely fitted within the casing and held therein against rotation, which is essential in order to admit of the in-and-out movement of the lock-bolt 7. The tube 6 is formed with an internally-threaded opening, the threads matching the threads provided upon the exterior of the lock-bolt 7. The plate 5 closes the outer end of the casing 3 and retains the lock-bolt and internally-threaded tube 6 in place and is formed with a keyhole 8 in line with a slot 9 in the outer end of the lock-bolt 7. The plate 5 is adapted to turn freely in the casing, so as to admit of rotation of the lock-bolt to effect a longitudinal movement thereof. The key 10 is crimped throughout its length and the opening 8 and slot 9 correspond to the shape of the crimps of the key to admit of the latter being placed in position when it is required to operate the lock-bolt. The shape of the crimps of the key and the form of the opening 8 and slot 9 will vary, so that each lock will require a special key, thereby preventing the opening of two or more locks by one key.

When it is required to lock the bicycle or like machine, the key 10 is inserted through the opening 8 and fitted into the slot 9 and is turned to rotate the lock-bolt and project it into the path of the part 1, thereby preventing rotation of the crank-shaft. By turning the lock-bolt in the reverse direction it is moved outward and clears the offstanding part 1, thereby permitting the crank-shaft to turn freely. By locating the lock as set forth it is out of the way and occupies a minimum amount of space and is durable and effective for the purpose designed.

As clearly indicated in Fig. 2, the lock is located in the angle formed between the front and rear reach-bars of the frame, hence is out of the way and protected from injury, and being arranged on the top side of the crank-hanger is readily accessible for operation.

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

In a bicycle or like machine, and in combination with the crank-hanger and crank-shaft, locking means located in the plane of

the frame and comprising a pin fitted in a transverse opening of the crank-shaft and having its end portions extended, a casing secured to the crank-hanger in the angle formed between the front and rear reach-bars, an internally-threaded tube secured within the casing, a lock-bolt having screw-thread connection with the said tube, and a plate rotatably fitted in the outer end of the casing and having a keyhole in line with the said lock-bolt for the insertion of a key for projecting the lock-bolt into the path of an extended end of the aforesaid pin or for withdrawing said lock-bolt out of the path of the said pin, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY W. MORGAN. [L. S.]

Witnesses:

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S. F. WOOD.