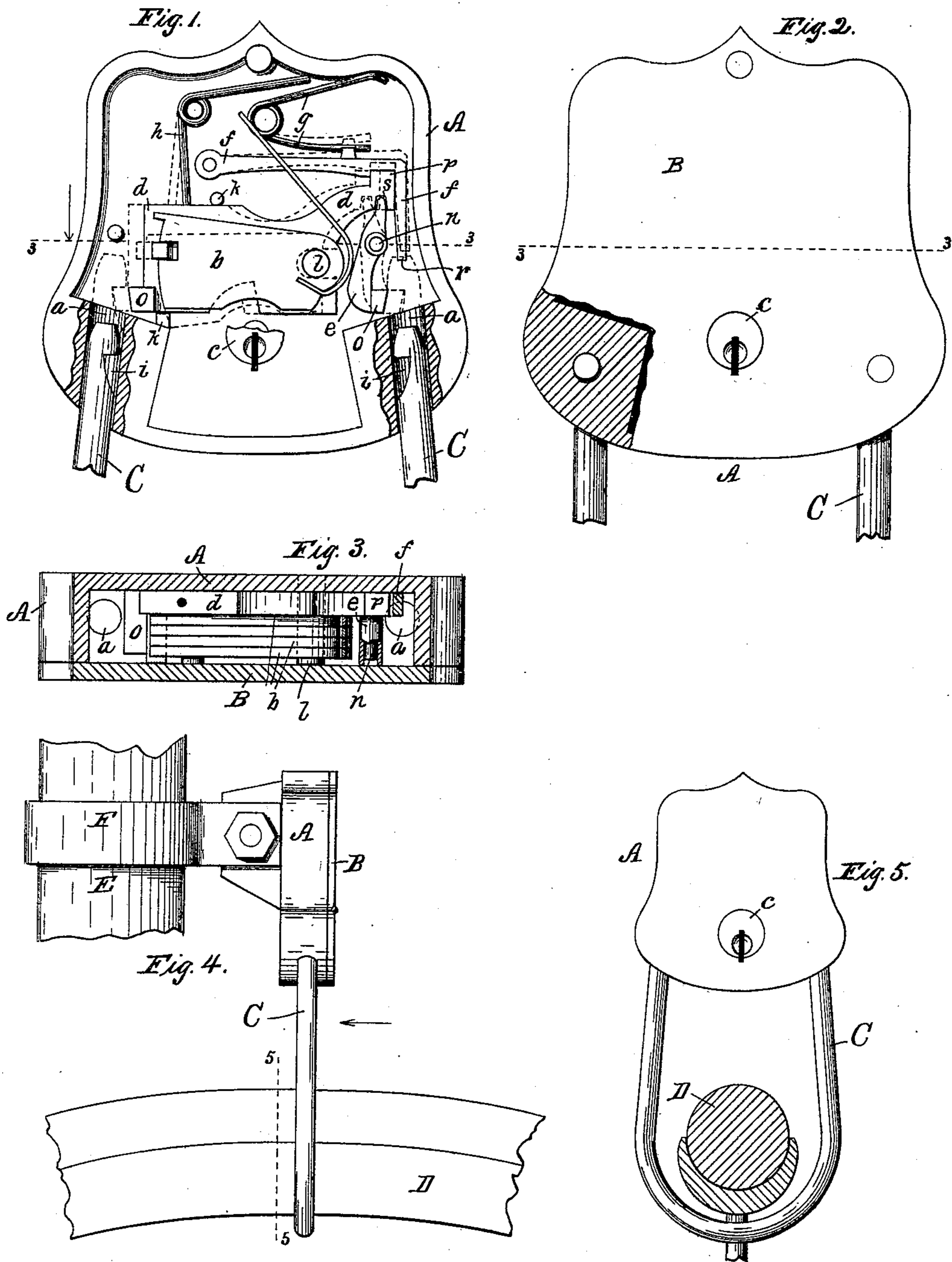


(No Model.)

E. W. MACAULEY.
BICYCLE LOCK.

No. 481,236.

Patented Aug. 23, 1892.



Attest:
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UNITED STATES PATENT OFFICE.

EDWIN W. MACAULEY, OF ROCHESTER, NEW YORK.

BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 481,236, dated August 23, 1892.

Application filed December 5, 1891. Serial No. 414,128. (No model.)

To all whom it may concern:

Be it known that I, EDWIN W. MACAULEY, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Portable Locks, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This is a tumbler-lock with a flat key and may be made of any desirable size and convenient form, and is here shown as applied to locking the wheel of a bicycle.

The invention is hereinafter more fully described, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 shows the interior of the lock, the cover being omitted, parts being shown in two positions by full and dotted lines. Fig. 2 is a face view of the lock, a part of the cover being broken away. Fig. 3 is a cross-section of the lock, taken upon the dotted lines 3 3 in Figs. 1 and 2. Fig. 4 is a side elevation of parts of a bicycle with the lock in place. Fig. 5 is a front elevation of the lock, the rim of the wheel being transversely sectioned on the dotted line 5 5 in Fig. 4.

Referring to the parts shown in the drawings, A is the body of the lock, which is a box or inclosure. (Shown in the form of a shield.)

B is the cover for the lock to complete the inclosure therein.

C is the hasp, which, as shown, is either U-shaped or in the form of a horseshoe, formed to have its free ends passed into the interior of the lock through openings *a a* therein.

b are the tumblers, which may be four (more or less) in number, and are of ordinary construction.

c is a plug slitted for a flat key, and it is of common form.

d and *e* are the bolts for holding the hasp operated by the key, the hasp being formed with openings or rests *i*, in which to receive the respective bolts.

f is a detent for the bolts, it being actuated by a spring *g*.

h is a spring connected with the bolt *d* to throw it and the bolt *e* outward and into the respective openings *i* in the free ends of the hasp.

As shown in Fig. 1, the bolt *d* is in the form

of a sliding piece, while the bolt *e* is pivoted and made in the form of a lever of the first order. The bolt *d* slides in the bearings *k k* and upon the rigid pin *l*, upon which the tumblers turn. The pivoted or lever bolt *e* is formed with a sleeve and turns upon a pin *n*, rigid with the body of the lock. The bolt *d* is formed with a notch *s*, into which the upper end of the bolt *e* enters, as shown. By this construction the operating parts or catch-pieces *o o* of the respective bolts move simultaneously in a direction toward each other or away from each other, as the case may be, when the bolt *d* is moved by either the key or the actuating-spring *h*. The spring acts to throw the bolts outward or into positions to lock the hasp.

As the parts are shown in full lines in Fig. 1, they are in positions to receive the hasp, the dotted-line position showing the hasp fully inserted into the lock, with the bolts occupying the openings *i*, locking the hasp to place. The detent catches onto an upwardly-extended part *p* of the bolt *d* when the latter is forced to the right by the key when unlocking the hasp. The downturned end *r* of the detent acts as a stop for the bolt in its movement toward the right, and when the bolts are in positions determined by the detent they not only release the hasp, but are ready to again receive the hasp and lock it in place when the detent is thrown off. When the hasp is inserted in the lock, the end of the right-hand prong encounters the downturned extended end *r* of the detent and pushing it upward releases the bolt *d*, which allows the bolts to be quickly thrown into the openings of the hasp by the spring *h*. The hasp is thus held immovable within the lock until the key is used to throw the bolt *d* again to the right to release it.

In applying this lock to a bicycle it is secured to the steering-head E of the vehicle by a clamp F, as shown in Fig. 4, in position to have the hasp passed under the rim of the wheel, as shown in Fig. 5, between two adjacent spokes. When the hasp is thus passed through the wheel and secured in the lock, it prevents the wheel from being turned.

This lock is susceptible of various uses, such as locking small boats to the moorings with the aid of chains and securing small articles

of any kind to place by means of links or chains.

What I claim as my invention is—

1. A lock having, in combination with tum-
5 blers, a sliding bolt and a pivoted or lever bolt
joined to each other to move in opposite direc-
tions, substantially as shown and described.
2. A lock having tumblers, in combination
with a sliding bolt and a pivoted or lever bolt
10 joined to the sliding bolt to move oppositely
to the latter and an actuating-spring and a
detent for the sliding bolt, substantially as
shown.
3. A lock having tumblers, in combination
15 with a sliding bolt and a pivoted bolt to move
simultaneously with the sliding bolt, the lat-
ter being joined to the pivoted bolt to move
it toward the right when the sliding bolt moves
toward the left or toward the left when the
20 sliding bolt moves toward the right, and a

hasp formed with openings or rests to receive
the bolts, substantially as shown and de-
scribed.

4. A lock having tumblers, in combination
with a sliding bolt and a pivoted bolt joined 25
to the sliding bolt to move oppositely to the
latter, a spring to actuate the sliding bolt, and
a detent for the sliding bolt, and a removable
hasp formed with rests to receive the respect-
ive bolts, the detent being in position to be en- 30
countered by the hasp to be thrown off the
sliding bolt to release the latter, substantially
as described.

In witness whereof I have hereunto set my
hand this 31st day of October, 1891, in the 35
presence of two subscribing witnesses.

EDWIN W. MACAULEY.

Witnesses:

ENOS B. WHITMORE,
M. L. McDERMOTT.

Edwin W. Macauley