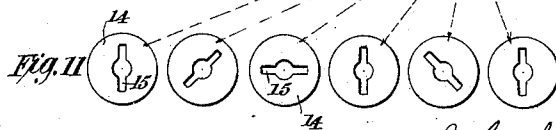
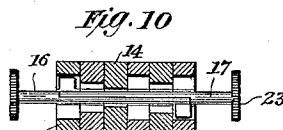
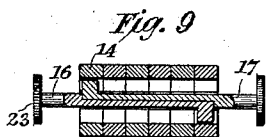
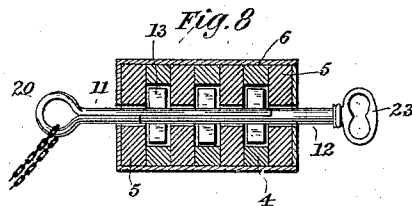
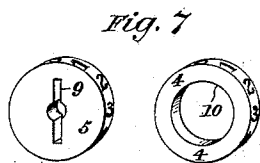
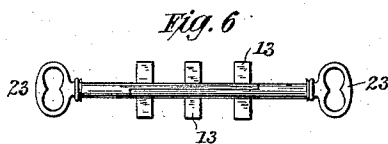
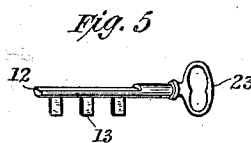
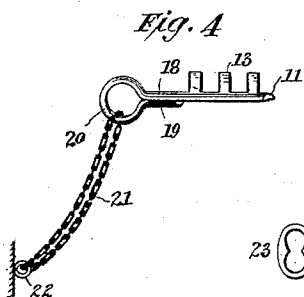
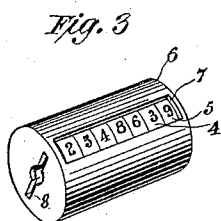
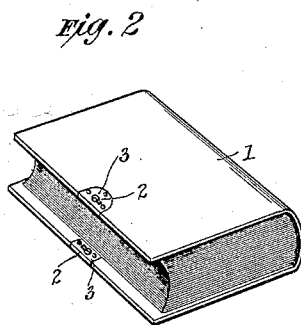
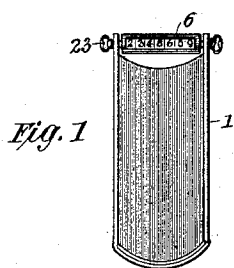


(No Model.)

J. I. COVINGTON.
MEANS FOR LOCKING BOOKS.

No. 468,512.

Patented Feb. 9, 1892.



Witnesses:
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W. C. Pinckney

Inventor
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UNITED STATES PATENT OFFICE.

JOHN I. COVINGTON, OF BROOKLYN, NEW YORK.

MEANS FOR LOCKING BOOKS.

SPECIFICATION forming part of Letters Patent No. 468,512, dated February 9, 1892.

Application filed October 7, 1891. Serial No. 407,974. (No model.)

To all whom it may concern:

Be it known that I, JOHN I. COVINGTON, a citizen of the United States, and a resident of Brooklyn, Kings county, New York, have invented a new and useful Improvement in Means for Locking Books, of which the following is a specification.

My invention relates to means for locking books to prevent access to the same and inspection of their contents.

The object of my invention is to construct a cheap, effective, and detachable locking means which can be readily applied to a book and as readily removed therefrom, and I accomplish this object by the means hereinafter described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a book with my invention applied thereto. Fig. 2 is a perspective view of a book constructed to permit the application of the locking means thereto. Fig. 3 is a perspective view of the lock. Figs. 4 and 5 represent the two parts of the key used in connection with the lock and the means secured to the book. Fig. 6 represents the position of the two parts of the key after insertion in the lock. Fig. 7 represents the two constructions of wheels or disks used in the lock. Fig. 8 is a longitudinal cross-section of the lock when locked with key in place. Fig. 9 represents a modified construction in which all of the wheels are alike in construction. Fig. 10 represents the modified construction in locked condition. Fig. 11 shows the varying positions of the several wheels of Fig. 10.

Referring to the drawings, the book, Figs. 1 and 2, has each of its two covers provided with a hole 2, protected by a metal reinforcing-piece 3, firmly riveted to each other. These holes 2 are preferably located where most effective in locking the covers of the book together.

The lock which I have invented to use in connection with books constructed in accordance with my invention consists of a series of disks or wheels 4 and 5, inclosed in a cylindrical case 6, provided with a slot 7 in its side to expose to view the numbers or characters on the wheels, and with a slot 8 in each end corresponding in form to a cross-section of

the key. The length of the cylinder will vary according to the number of wheels contained therein, the greater the number of wheels the more difficult or impossible, of course, to open the lock.

In Figs. 3 and 8 I have shown seven wheels consisting of four wheels 5, provided with slots 9, and three wheels 4, having circular openings 10. These two sets of wheels are arranged alternately, as shown, the wheels 5 being at the ends of the series. Each of the seven wheels has printed or impressed on its periphery (see Fig. 7) a series of numbers from 0 to 9, arranged consecutively.

Instead of numbers, letters or other characters could be used; but numbers are preferred, and instead of using ten numbers on the periphery a less or greater number could be employed.

I employ in connection with the lock so far described a two-part device, which is herein for convenience called a "key," it forming a member of the locking means and consisting of the parts 11 and 12, each part, if the lock embraces only three wheels, as 4, being provided with three projections 13, the number of projections always corresponding to the number of wheels 4. The slots in the wheels 5 are stamped out to occupy a relative position to the position of the numbers arranged on the periphery, so that when the proper combination is shown through the opening in the cylinder the slots 9 of all the wheels 5 may be in line with each other and with the slots 8 in the cylinder, so that the key may be inserted or withdrawn therefrom. It follows from this construction that each wheel 5 can occupy but two positions that will permit insertion or removal of key, one being diametrically opposite the other. Consequently each lock can be locked or opened on only two different combinations determined at the time of construction of the lock. The wheels 4, having each a circular opening sufficiently large to permit revolution of the same on the key without the movement of one affecting that of the other, are therefore only dummies, and their relative position can be disregarded in using the lock. The operation of the mechanism so far described is as follows: If, for example, the lock is constructed to open on the combina-

tion "2469," then the four wheels 5 are turned until these numbers appear opposite the slot in the cylinder. The said cylinder is then placed between the covers of the book to be locked and the two-part key is inserted through the holes 2 of the covers of the book into the cylinder until it occupies the position shown in Fig. 8—*i. e.*, until the projections of the key are within the circular openings of the wheels 4—after which the wheels 5 are each turned more or less, as may be desired, to bring their slots 9 out of line with each other and with the slots in the cylinder. The two-part key cannot, therefore, be withdrawn until the four wheels are again turned to bring the combination "2469" into view, and as the heads 23 of the key cannot pass through the holes of the covers of the book it follows that the book cannot be opened. In the construction shown in Figs. 9 to 11 the wheels 14 within the cylinder are all alike, each having formed in it the slot 15. The two-part key 16 and 17 used in this case has only one projection to each part, and when the wheels have all their slots in register it is inserted so that the two projections of the key rest in the first and last wheels in the cylinder. The four intermediate wheels can then be turned on the shank of the key to disarrange the combination, as illustrated in Figs. 10 and 11. The key can be formed like an ordinary key, as shown in Figs. 4 and 5, or it may have a flat milled head, as illustrated in Figs. 9 and 10.

It is frequently desirable in addition to locking a book to prevent its being stolen or displaced, and to this end I have constructed the key so as to not only permit the connection of a chain thereto, but so that the lock will co-operate therewith in preventing the removal of the chain. I split the shank of the key, so as to open the loop 20 of the handle, as shown in Fig. 4, the two separated parts 18 and 19 being capable of being pressed apart to allow a chain 21 to pass through into the loop and in their closed condition fitting into the slot in the cylinder, and thus closing the entrance to the loop 20 and preventing the withdrawal of the chain. The chain thus secured to the book may be fastened to a desk, stand, or other suitable support by a staple 22, as shown in Fig. 4, or in any other suitable manner.

I do not in this application lay any claim to the locking means itself herein described, as I have filed a separate application for the same under date of January 9, 1892, Serial No. 417,478.

Having thus described my invention, what I claim, and desire to secure by United States Letters Patent, is—

1. A book the covers of which are each provided with a hole, in combination with a separate locking means, a member of which passes into the holes in said covers, substantially as described.

2. A book the covers of which are provided

with holes 2, in combination with a combination-lock and key adapted to co-operate with said covers and lock, substantially as described.

3. A book the covers of which are provided with holes 2, in combination with a combination-lock and a two-part key adapted to pass through the holes in the covers into the lock, substantially as described.

4. The combination, with a book having a cover provided with a hole 2, of a lock consisting of a slotted cylinder provided with slots or holes in its ends, a series of numbered wheels provided with openings, and a key adapted to be passed through the hole of the book-cover and through the slots of the cylinder into said wheels, substantially as described.

5. The combination, with a book having covers provided with holes 2, of a lock consisting of a slotted cylinder having slots or holes in its ends, a series of numbered wheels provided with openings, and a two-part key adapted to be passed through the holes of the book-covers and through the slots of the cylinder at both ends and into said wheels, substantially as described.

6. The combination, with a book having a cover provided with a hole 2, of a lock consisting of a slotted cylinder having slots or holes in its ends, two sets of numbered wheels, of which one set is provided with slots and the other set with circular openings, and a key adapted to be passed through the hole of the book-cover and through the slots of the cylinder into said wheels, substantially as described.

7. The combination, with a book having covers provided with holes 2, of a lock consisting of a slotted cylinder having slots or holes in its ends, two sets of numbered wheels, of which one set is provided with slots and the other set with circular openings, and a two-part key provided with a series of projections and passing through the holes of the book-covers, through the slots or holes of the cylinder, and into the said wheels, substantially as described.

8. The combination, with a book having a cover provided with a hole 2, of a lock provided for locking books, in combination with a key having a split shank forming an open-looped handle, the said shank passing through the hole of the book-cover and into the lock and thereby closing the opening to the loop, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 6th day of October, 1891.

JOHN I. COVINGTON.

Witnesses:

JOHN R. BAUTA,
C. L. WISE.