(No Model.)

J. A. FOLSOM.

KEYLESS BICYCLE LOCK.

No. 555,477. Patented Feb. 25, 1896.

Fig. 1

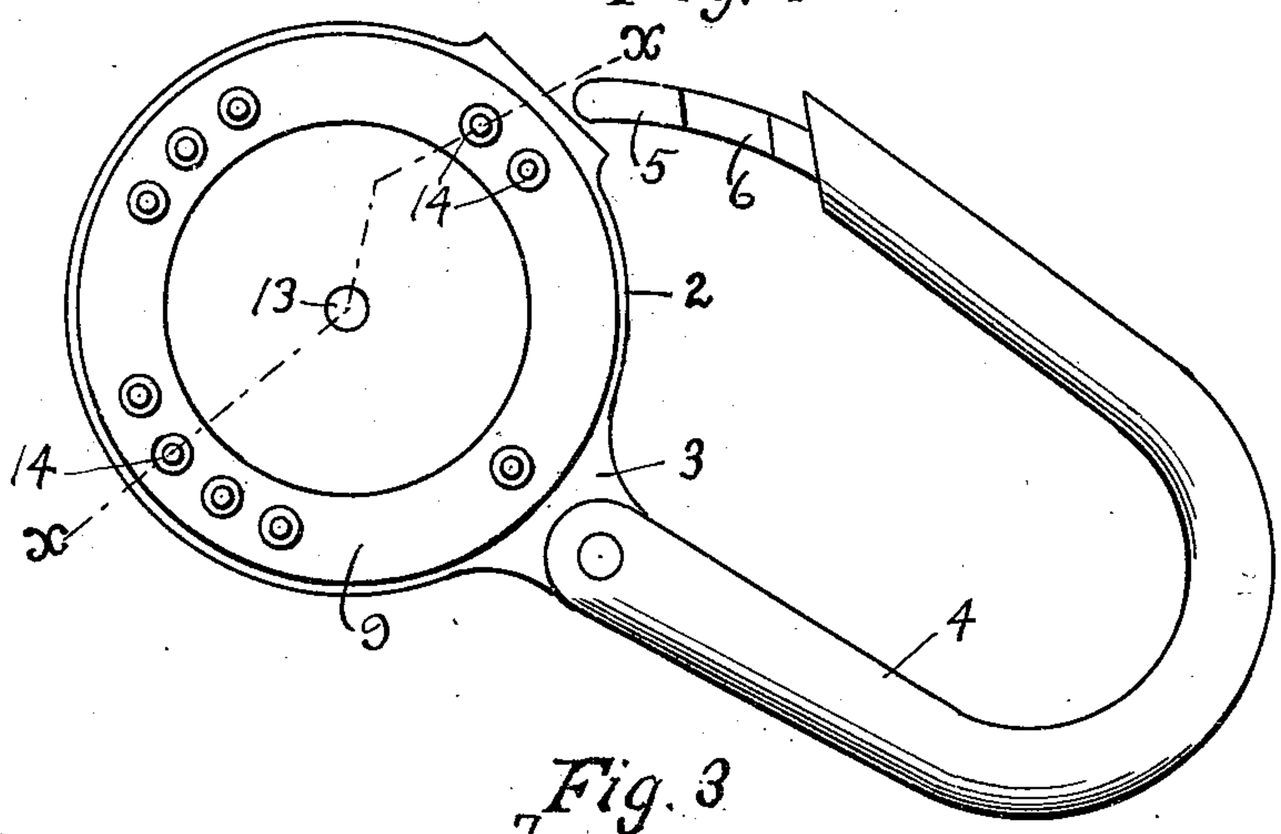


Fig. 3

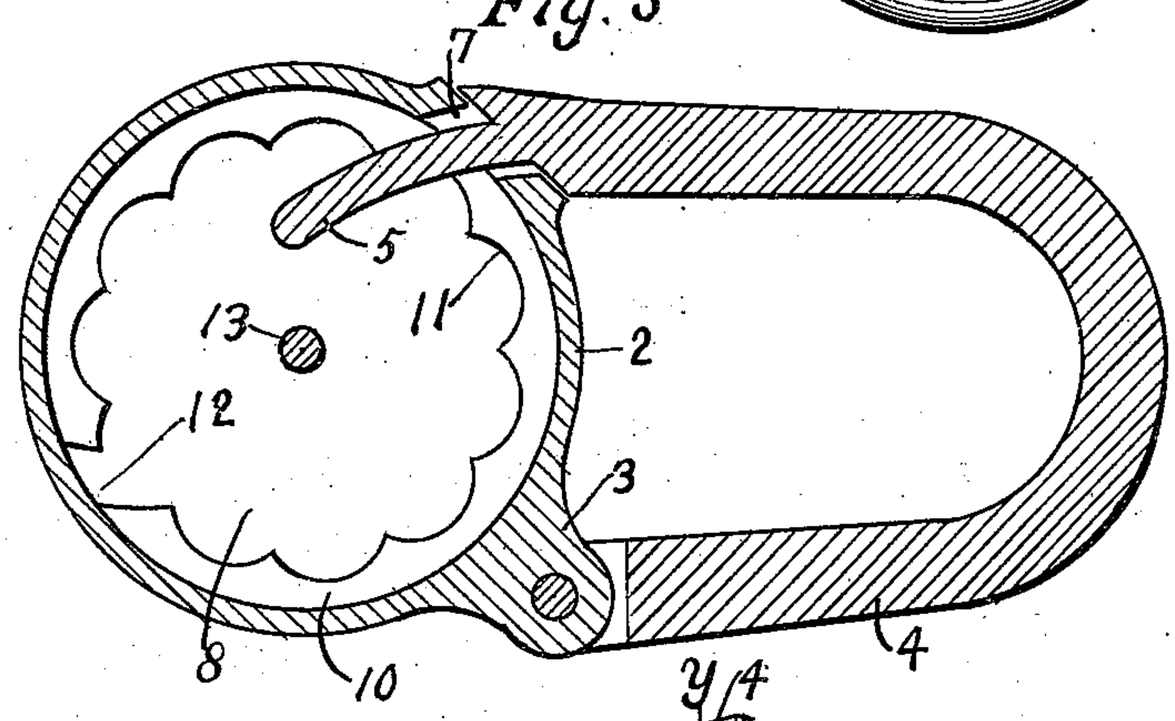
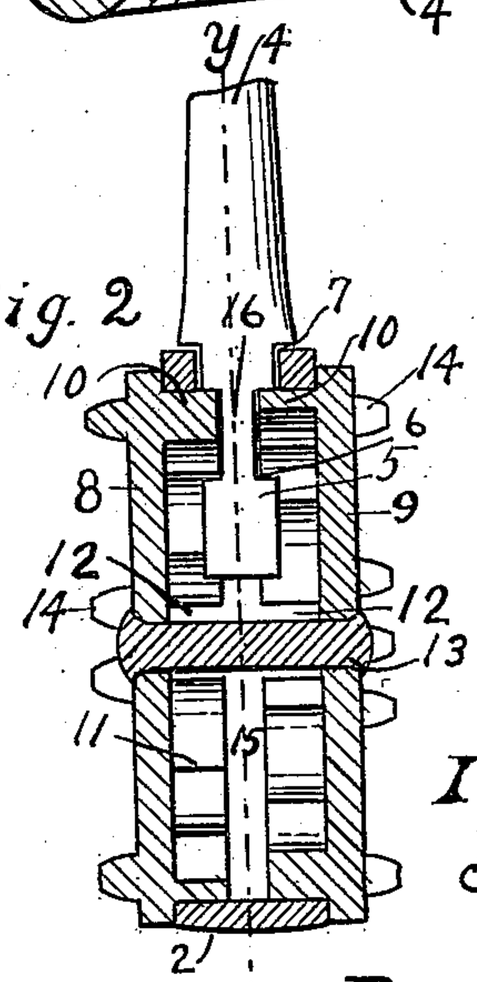


Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. FOLSOM, OF MINNEAPOLIS, MINNESOTA.

KEYLESS BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 555,477, dated February 25, 1896.

Application filed October 8, 1895. Serial No. 565,010. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. FOLSOM, of the city of Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Keyless Bicycle-Locks, of which the following is a specification.

My invention relates to a keyless padlock particularly adapted for use in locking bicycles; and the object of my invention is to provide a padlock of an extremely simple and cheap construction, of the permutation or combination type, and which may therefore be locked and unlocked without the usual key.

To this end my invention consists in the combination, with a case or ring, of a shackle pivoted thereto, said case or ring having an opening for the tongue of the shackle, two disks arranged upon opposite sides of the case and having annular flanges to fit within the same, said disks being secured by a central pivot or pin and adapted to revolve freely with respect to the case, and notches provided in the flanges of said disks, upon the bringing together of which notches the tongue of the shackle will be released from engagement with the flanges.

Further, my invention consists in particular constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is an enlarged view of a keyless lock embodying my invention. Fig. 2 is a sectional view thereof on the line $x\,x$ of Fig. 1. Fig. 3 is a transverse section substantially on the line $y\,y$ of Fig. 2.

As shown in the drawings, 2 represents the case, which is in the form of a single ring, finished upon its inside and upon its edges. This ring is provided with the lug 3, to which is pivoted the shackle 4. The shackle is provided with the tongue 5, having notches 6 upon opposite sides, and this tongue is adapted to enter the opening 7 in the ring or case 2.

8 and 9 represent similar disks having annular flanges 10 adapted to fit within the ring or case 2. The interior of each flange has a series of notches or scallops 11, and each flange is provided with a notch or groove 12 of a size to admit the larger portion of the shackle-tongue. The disks are secured together and held in the case by a central pivot or pin 13. On the outer surface of each disk I provide a number of projections or lugs 14 arranged in groups to take the place of numbers or other graduations, and which are of sufficient prominence to enable a person to operate the lock without looking at the same or without the aid of a light, if in the dark. The notches 12 are in different positions in the flanges of different locks, so that various combinations may be produced, and no two locks need be alike. The flanges do not occupy the entire space within the case, a space 15 remaining to admit the narrow portion 16 of the tongue, the T-head of which locks the shackle when the disks are in any other position than that in which the openings 12 register with the opening 7 in the case. The scallops 11 in the flanges of the disks prevent the operation of the lock by the distinction of sounds or touch.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the case, of the shackle provided with the tongue to enter an opening in the case, said tongue having the T-head, revoluble disks forming the opposite sides of the case and having flanges projecting into the same, said flanges having notches to register with the openings in the case, whereby the tongue of the shackle may be inserted or freed therefrom, substantially as described.

2. The combination, with the case, of the shackle provided with the tongue to enter an opening in the case, said tongue having the T-head, revoluble disks forming the opposite sides of the case and having flanges projecting into the same, said flanges having notches to register with the openings in the case, whereby the tongue of the shackle may be inserted or freed therefrom, said flanges having internal notches or scallops, as and for the purpose specified.

3. The combination, with the case, of the shackle provided with the tongue to enter an opening in the case, said tongue having the T-

head, revoluble disks forming the opposite sides of the case and having flanges projecting into the same, said flanges having notches to register with the openings in the case, whereby the tongue of the shackle may be inserted or freed therefrom, and the outer surfaces of said disks being provided with raised parts or projections arranged in groups or in other positions to facilitate the operation of the lock, substantially as described.

4. The combination, with the cylindrical case, of the shackle pivoted thereon and having a tongue to enter an opening in said case, disks forming the opposite sides of said case having annular flanges to enter the same, said flanges provided with notches which may be turned to register with the opening in the case, a pin or pivot whereby said disks are secured in position, the tongue of said shackle provided with a head adapted to engage the interior surfaces of said flanges, and graduations provided upon the outer surfaces of said disks, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand this 25th day of September, A. D. 1895.

JOHN A. FOLSOM.

In presence of—
F. S. LYON,
B. P. SHEPHERD.