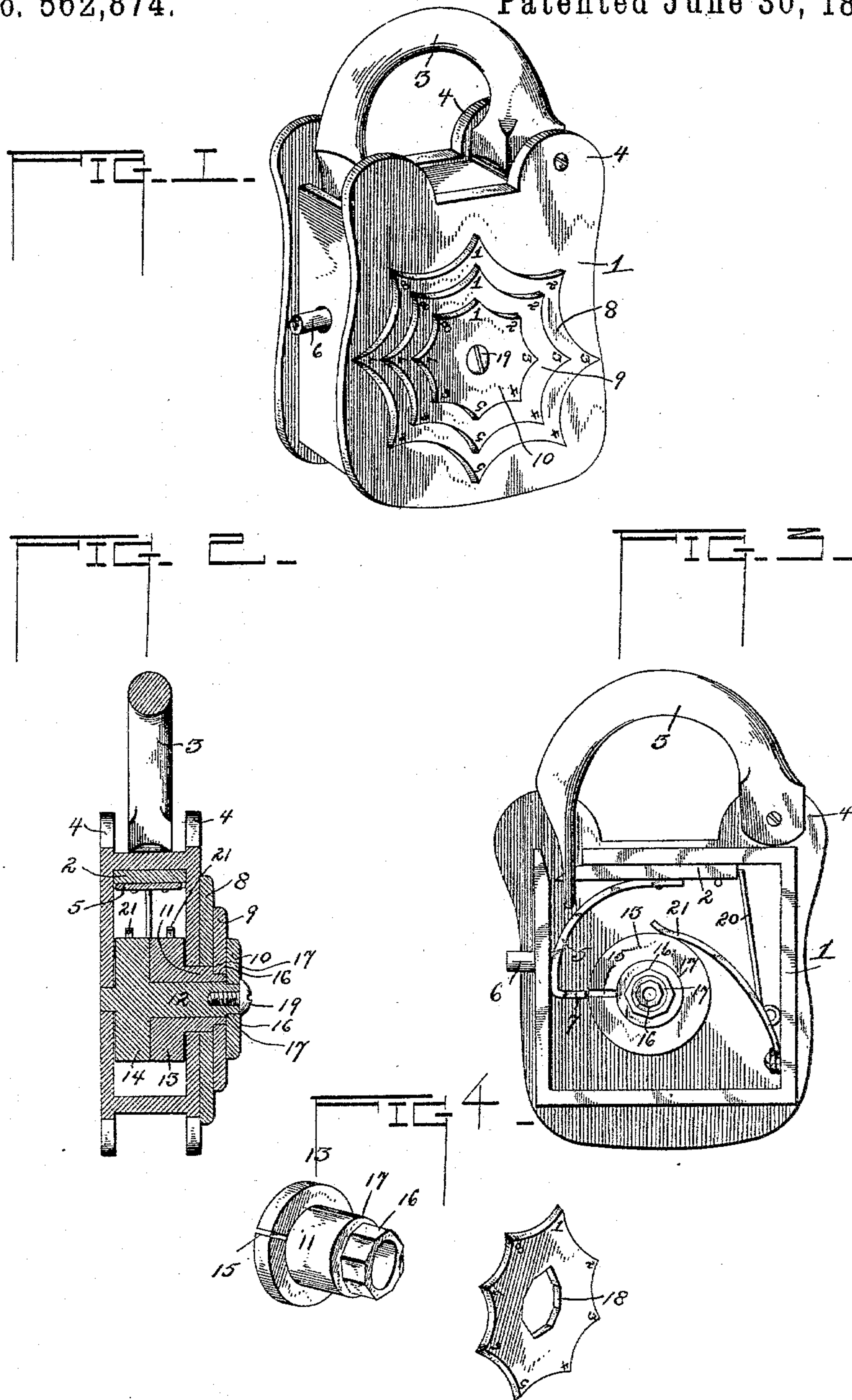


(No Model.)

F. S. WILCOX.
PERMUTATION PADLOCK.

No. 562,874.

Patented June 30, 1896.



Inventor

Witnesses

Milton O'Connell
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UNITED STATES PATENT OFFICE.

FERDENAND S. WILCOX, OF IOLA, TEXAS.

PERMUTATION-PADLOCK.

SPECIFICATION forming part of Letters Patent No. 562,874, dated June 30, 1896.

Application filed April 15, 1896. Serial No. 587,661. (No model.)

To all whom it may concern:

Be it known that I, FERDENAND S. WILCOX, a citizen of the United States, residing at Iola, in the county of Grimes and State of Texas, have invented a new and useful Combination-Lock, of which the following is a specification.

My invention relates to combination or permutation locks, and has for its object to provide a simple, inexpensive, and efficient construction and arrangement of parts whereby the bolt is firmly held in its locked position, and whereby the combinations may be changed with facility, and without opening the lock-casing.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a padlock embodying my invention. Fig. 2 is a vertical transverse section of the same, taken in the plane of the axes of the tumblers. Fig. 3 is a front view with the front plate omitted. Fig. 4 is a detail view, in perspective, of the tubular tumbler-spindle and tumbler, together with the disk for operating the same, the disk being detached.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a casing in which is arranged a bolt 2, and in the construction illustrated the bolt is adapted for engaging the free end of a padlock-shackle 3, which is pivoted between ears 4, formed as extensions of the casing. It will be understood, however, that the construction of locking devices for the bolt hereinafter described are applicable to other forms of sliding bolts without material change of arrangement. In the construction the bolt is provided with an arm 5, having a push-pin 6, projected through an opening in the end or wall of the casing, said arm terminating in a lip or wing 7.

Secured to or integral with the front face-plate of the casing is a stationary circumferentially toothed or pointed indicating-dial 8, and mounted for rotation parallel therewith and in contiguous planes are disks 9 and 10 of different diameters, the same being reduced consecutively as they recede from the plane

of the dial 8, and each being provided with circumferential teeth or points which are numerically, or otherwise, designated to correspond with the characters upon the teeth or points of the indicating-dial. These disks are carried by concentric spindles 11 and 12, which in turn carry tumblers 13 and 14, having peripheral radial slots 15, adapted to be arranged in alinement with the direction of movement of the lip or wing 7 of the bolt. When said slots are arranged thus in alinement with the lip or wing of the bolt, the bolt may be retracted or repressed by means of the push-button, or by other means provided for this purpose, but when said slots, or one of them, are out of alinement with the lip or wing the bolt is locked against movement.

The disks are removably and adjustably fitted upon the front ends of the tumbler-spindles, said spindles being preferably provided with cross-sectionally-angular tips 16, arranged contiguous to shoulders 17 and adapted to fit correspondingly-shaped seats 18 in the disks. The outermost disk is secured to the central spindle by means of a locking-screw 19, and hence the inner disks are similarly held from displacement without independent fastening devices. This portion of the construction provides for changing the combination of the lock without opening or closing thereof. It is simply necessary to remove the locking-screw and change the disks to the desired combination.

The locking-bolt is provided with an actuating-spring 20, and a plurality of friction or brake springs 21 are carried by the casing in operative relation with the tumblers to prevent accidental displacement thereof by jarring or otherwise.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a lock, the combination with a bolt having a lip or wing, of rotary coaxial tumblers coöperating with said lip or wing and having concentric spindles, and operating-disks removably and adjustably secured to the front extremities of the tumbler-spindles

whereby the combination may be changed without access to the interior of the casing, substantially as specified.

2. The combination with a bolt, of cooperating rotary tumblers, concentric tumbler-spindles provided at their front extremities with cross-sectionally-angular tips and contiguous shoulders, operating-disks provided with cross-sectionally-angular seats to receive said tips, the disks being arranged in contiguous planes, and a locking-screw for securing the outermost disk to the central spindle, substantially as specified.

3. The combination of a bolt having an arm terminating in a lip or wing and provided with

a push-button, rotary tumblers having slots adapted to receive said lip or wing, friction or brake springs arranged in permanent contact with the tumblers, concentric tumbler-spindles, and operating-disks adjustably secured to the front extremities of the tumbler-spindles, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FERDENAND S. WILCOX.

Witnesses:

J. M. BARRON,

W. F. WILCOX.