

C. A. BAILEY.
COMBINATION LOCK.

Patented Aug. 31, 1897.

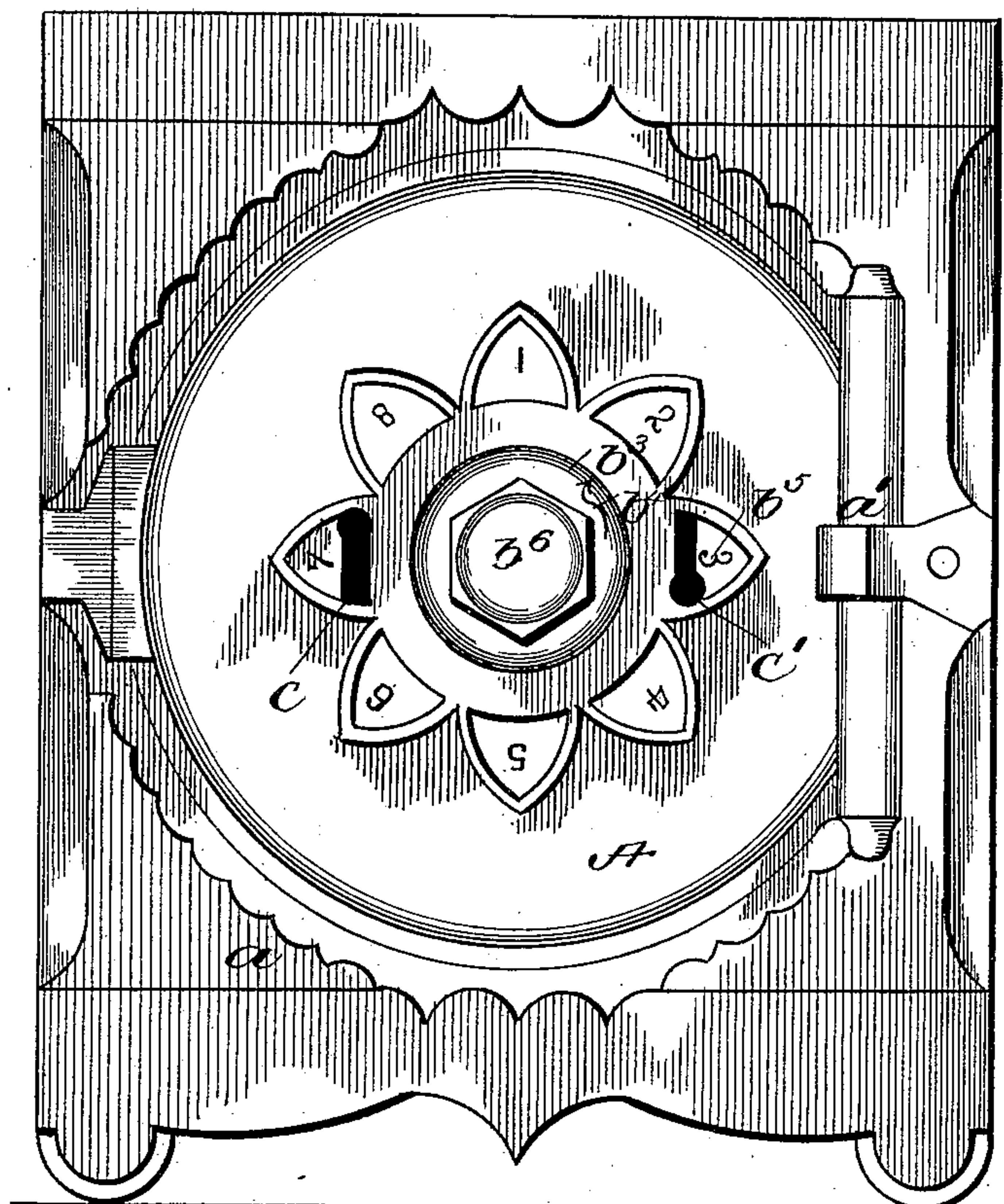


Fig. 1.

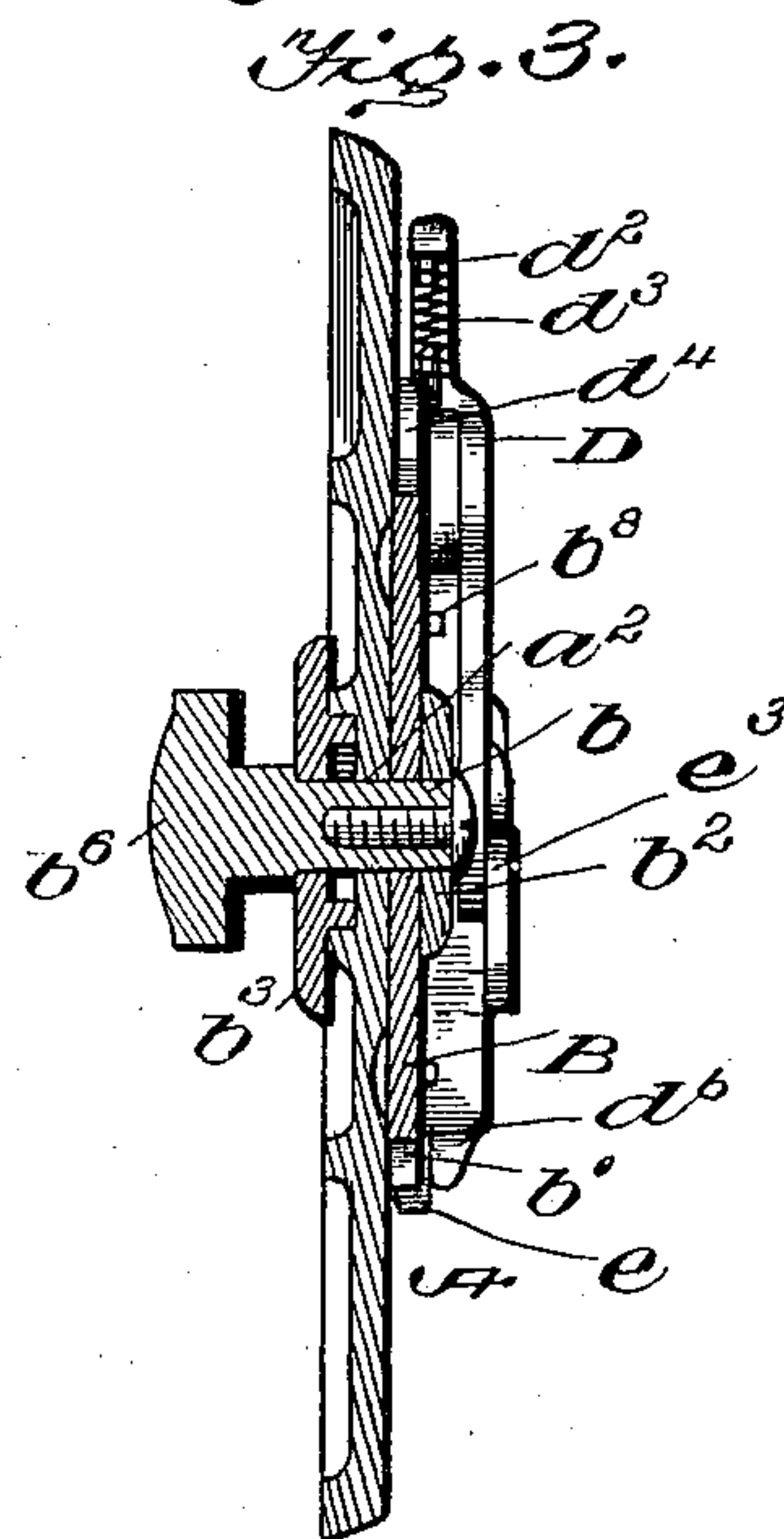


Fig. 3.

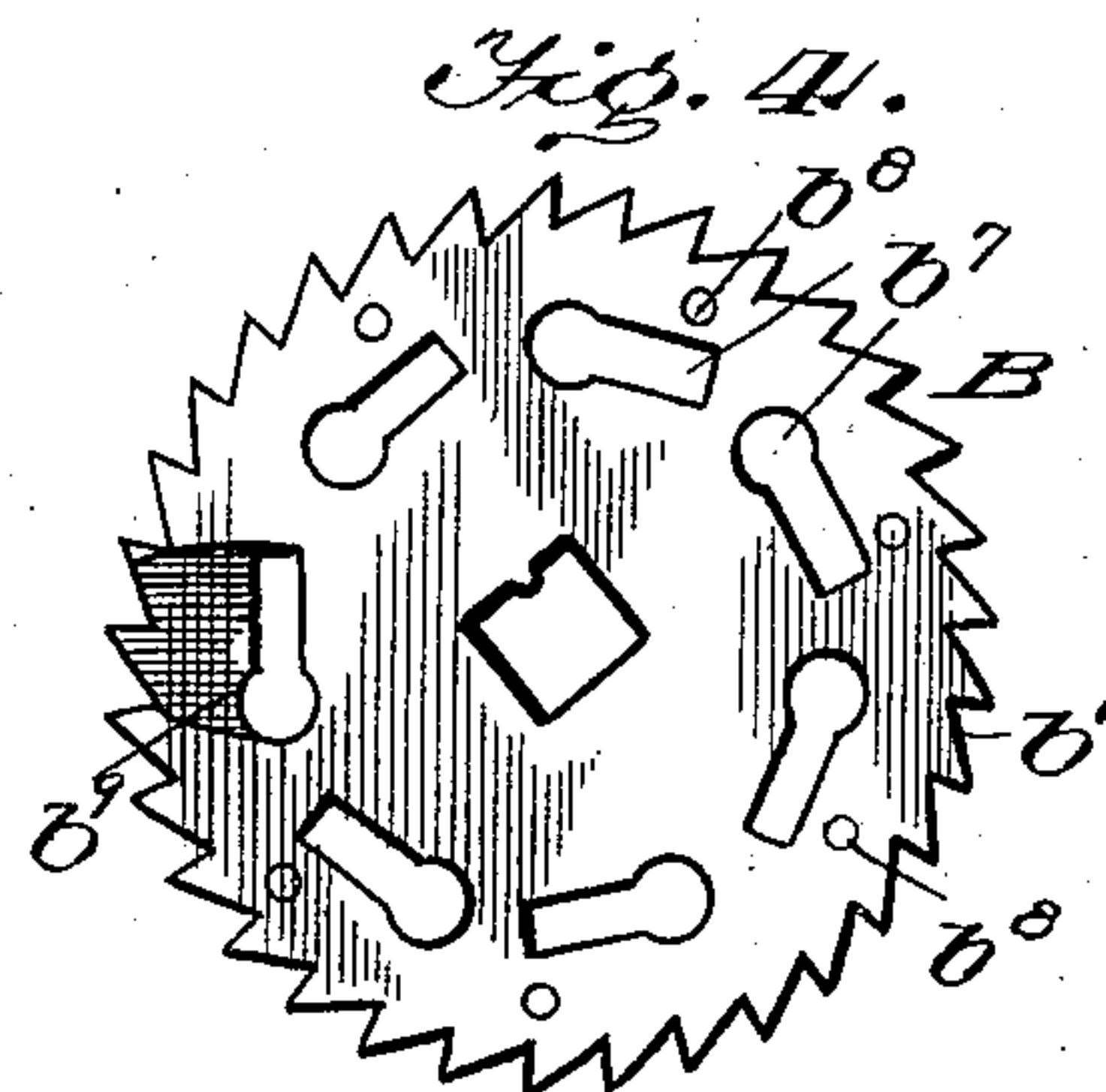


Fig. 4.

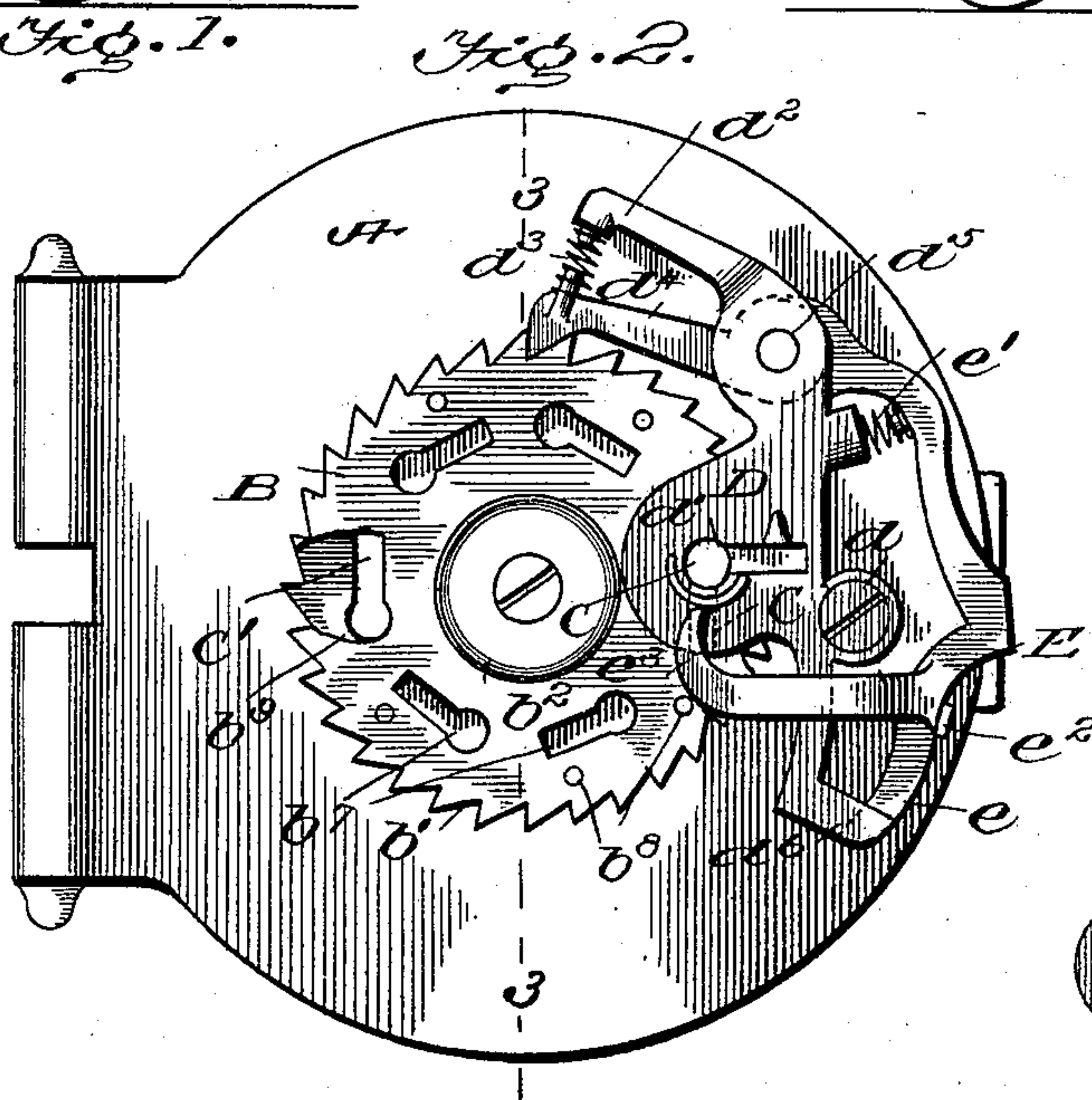


Fig. 2.

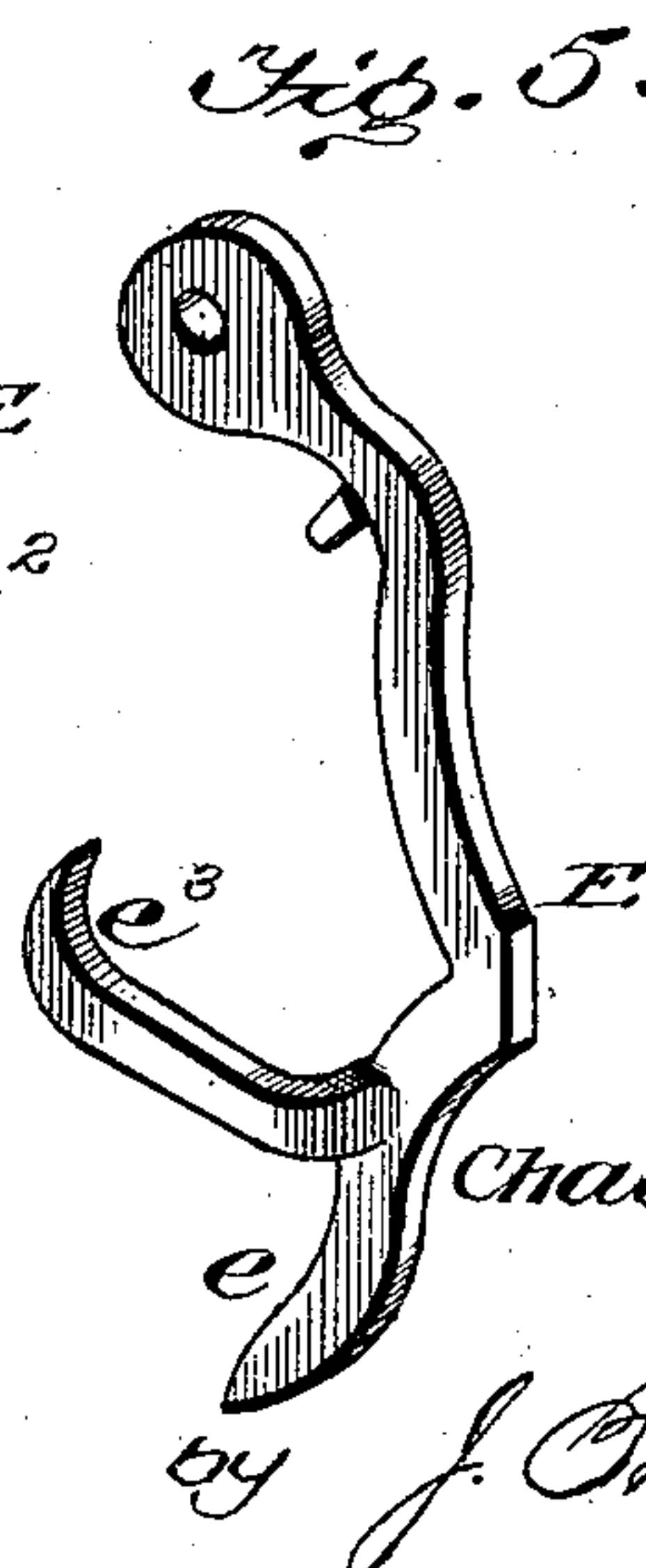


Fig. 5.

Witnesses

Witnesses
Jno. Munn
Wm S. Dodge

Inventor
Chas. A. Bailey.

by *J. Fred. Reilly*
His Attorney.

UNITED STATES PATENT OFFICE.

CHARLES A. BAILEY, OF CROMWELL, CONNECTICUT, ASSIGNOR TO THE
J. & E. STEVENS COMPANY, OF SAME PLACE.

COMBINATION-LOCK.

SPECIFICATION forming part of Letters Patent No. 589,327, dated August 31, 1897.

Application filed May 15, 1897. Serial No. 636,691. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BAILEY, a citizen of the United States, residing at Cromwell, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Combination-Locks for Toy Safes; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in locks for toy safes; and it has for its object the production of a lock of this character which will be simple and inexpensive and at the same time possess many of the characteristics of the combination-locks now employed on large safes. These objects I accomplish by pivotally mounting on the door of the safe a disk having ratchet-teeth in its periphery adapted to be engaged by a suitable spring-pressed pawl, said disk being provided with a series of keyholes arranged concentrically thereon and adapted to register with either one of two keyholes formed in said door. A suitable key is designed to be inserted through one of said latter keyholes, the bit thereof being adapted to engage and move an arm or lever connected with the latch of the lock, whereby the same may be moved. All of the keyholes formed in said disk save one are provided with a lug or pin to prevent the turning of the key, the combination of the lock being varied by varying the positions of said lugs or pins. A suitable disk and scale on the front of the safe-door indicate when the correct combination has been obtained.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front view of the door of a toy safe, illustrating my invention. Fig. 2 is a rear view thereof. Fig. 3 is a longitudinal sectional view on line 3 3, Fig. 2. Figs. 4 and 5 are details.

Referring to the drawings, A designates the door of a toy safe, and *a* the walls of the safe, said door being pivoted to the latter at *a'*. Projected through a hole or opening *a*² in said door is a shaft *b*, on the inner end of which is secured a disk B, having peripheral teeth *b'*, said disk being held rigid on said shaft by means of a plate or washer *b*². On the outer end of said shaft is keyed a second disk *b*³, having an arrow or other indicator *b*⁴ thereon which is adapted to coincide with a scale or the like *b*⁵ on the exterior surface of the door A. Said shaft *b* is rotated by means of a suitable knob *b*⁶. The disk B is provided with a concentric series of keyholes *b*⁷, adapted to coincide with two keyholes C C', formed in the door A, the latter opening C' being merely a blind. Pins or lugs *b*⁸ project from the face of said disk adjacent each keyhole *b*⁷ save one, *b*⁹, as illustrated in Figs. 2 and 4.

D is a plate or casting secured at *d* to the door A and is provided with a keyhole *d'*, opposite to but at right angles with keyhole C, said plate projecting over the face of disk B. The upper end of said plate is extended at *d*² to form a bearing-lug for a spring *d*³, which is adapted to normally hold a pawl *d*⁴ in engagement with the periphery of said disk B, said pawl being pivoted at *d*⁵. The lower end of said plate is provided with a right-angular extension *d*⁶, adapted to form a guide for a projection *e* of the latch E, which is also pivoted at *d*⁵, a spring *e'* serving to hold said latch normally in engagement with the walls *a* of the safe, the forward movement of the same being limited by a lug *e*². Said latch is provided with a rearwardly-extended hook-arm *e*³, adapted to be engaged by the bit of a key, whereby said latch will be moved against its spring.

In practice a key is inserted through one of the keyholes in the door, passing through the keyhole of the disk B, which has no lug adjacent thereto, and the same is then turned until it registers with the keyhole *d'* of plate D, whereupon it is inserted therethrough. The bit thereof will then engage the hook-arm *e*³, whereby the latch will be moved. It will be particularly noted in this connection that the lugs *b*⁸ will prevent the key from be-

ing turned to register with keyhole d' , as the same will engage the bit thereof and prevent further movement of the same. Of course the scales on the exterior of the door are arranged to present the proper keyhole of disk B in register with the openings C and d' .

The advantages of my invention will be at once apparent from the foregoing, and it will be particularly noted that I have produced a simple and inexpensive safe-lock which will be strong and durable and one which is not liable to readily get out of order or become deranged.

I claim as my invention—

1. The combination with a door having a keyhole formed therein, of a latch pivoted thereto, a rotatable disk also mounted on said door and having a series of keyholes therein adapted to register with said former keyhole, and means adjoining all but one of the keyholes in the disk to prevent a key from engaging said latch, as set forth.

2. The combination with a door having a keyhole formed therein, of a rotatable disk mounted thereon and having a series of keyholes therein adapted to register with said former keyhole, pins or lugs formed on the face of said disk adjacent each of said keyholes save one, and a latch adapted to be engaged and moved by a key, as set forth.

3. The combination with a door having one or more keyholes therein, of a toothed disk mounted on said door and having a series of concentrically-arranged keyholes adapted to register with said former keyholes, pins or lugs formed on said disk adjacent each of said keyholes save one, a pawl adapted to engage the teeth of said disk, and a latch adapted to be engaged and moved by a key, substantially as set forth.

4. The combination with a door having one or more keyholes therein, of a plate or casting secured thereto and having a keyhole coincident with one of said former keyholes, but at right angles thereto, a disk having a series of keyholes therein adapted to coincide with the keyholes of said door and said plate or casting, and a latch adapted to be engaged and moved by a key, substantially as set forth.

5. The combination with a door having a keyhole therein, of a plate or casting secured thereto and having a keyhole coincident with said former keyhole but at right angles thereto, a disk mounted on said door and having a series of concentrically-arranged keyholes adapted to coincide with said former keyholes, pins or lugs formed on said disk adjacent each of said keyholes save one, and a

latch adapted to be engaged and moved by a key, substantially as set forth.

6. The combination with a door having a scale on its front face and a keyhole, of a shaft mounted in said door and having a disk secured on one end thereof, said disk having an arrow or indicator thereon adapted to coincide with said scale, a second disk mounted on the other end of said shaft and having a series of keyholes adapted to register with said former keyhole, means secured to said latter disk for preventing the turning of a key in all of said keyholes save one, and a pivoted latch adapted to be engaged and moved by a key, substantially as set forth.

7. The combination with a door having a keyhole therein, of a disk having a series of concentrically-arranged keyholes adapted to register with said former keyhole, a plate or casting secured to said door and having a lower right-angular extension, and a pivoted latch having an arm or extension adapted to be guided by said right-angular extension, substantially as set forth.

8. The combination with a door having a keyhole therein, of a disk having a series of concentrically-arranged keyholes adapted to register with said former keyhole, a plate or casting secured to said door and having a keyhole adapted to coincide with the keyhole of the latter but arranged at right angles thereto, and a pivoted latch having a hooked arm or extension adapted to be engaged by a key, substantially as set forth.

9. The combination with a door having a keyhole therein, of a plate or casting having a keyhole therein adapted to register with said former keyhole but arranged at right angles thereto, said casting having a lower right-angular extension, a toothed disk having a series of concentrically-arranged keyholes adapted to register with said former keyholes, pins or lugs secured to said disk adjacent each of said keyholes save one, a spring-pressed pawl adapted to engage said disk, and a spring-pressed pivoted latch having a lower extension adapted to be guided by the right-angular portion of said plate or casting, said latch having a hook-arm or extension adapted to be engaged by a key, substantially as set forth.

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

CHAS. A. BAILEY.

Witnesses:

THOS. W. BEAUMONT,
ARTHUR BOARDMAN.