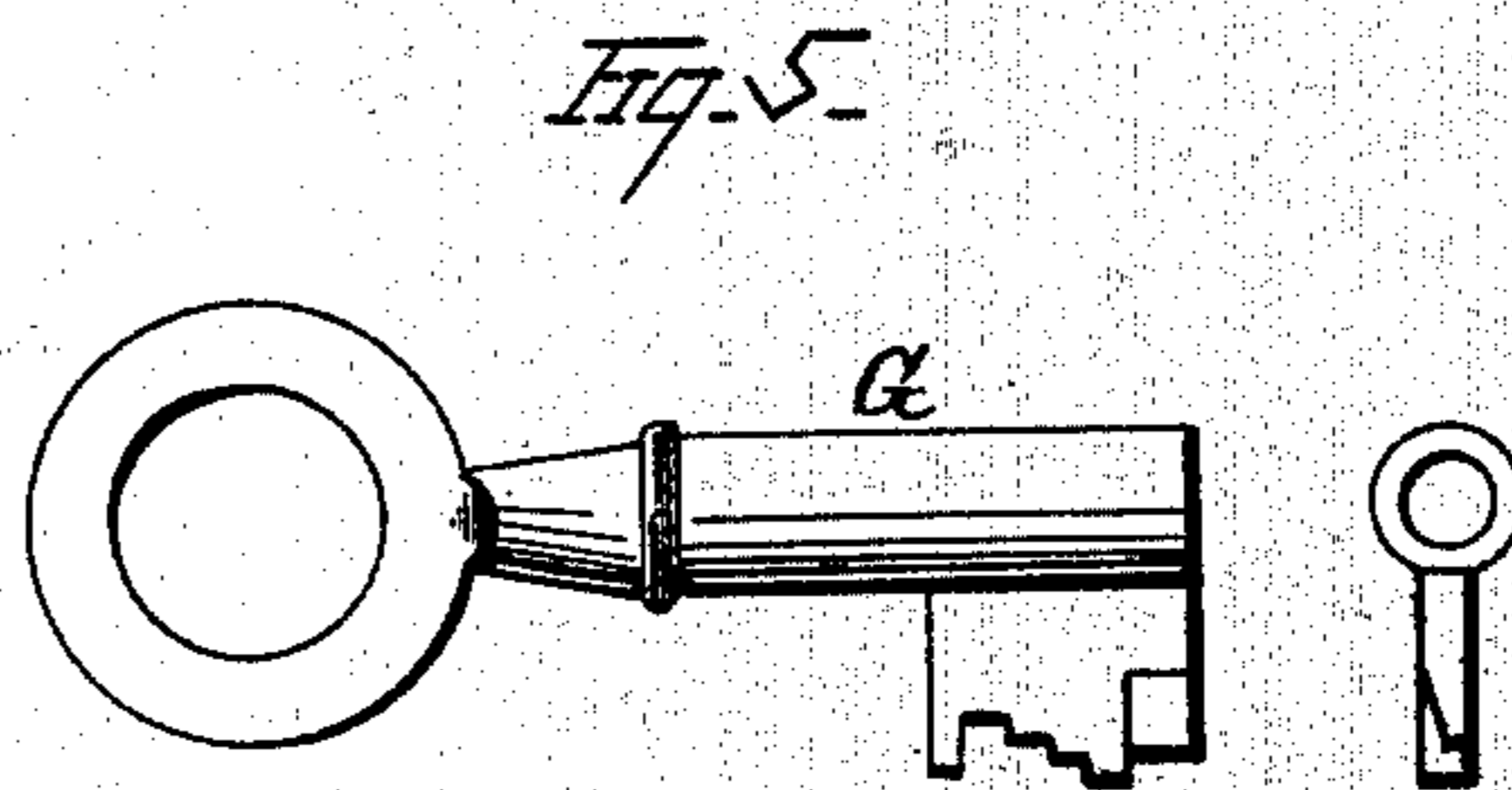
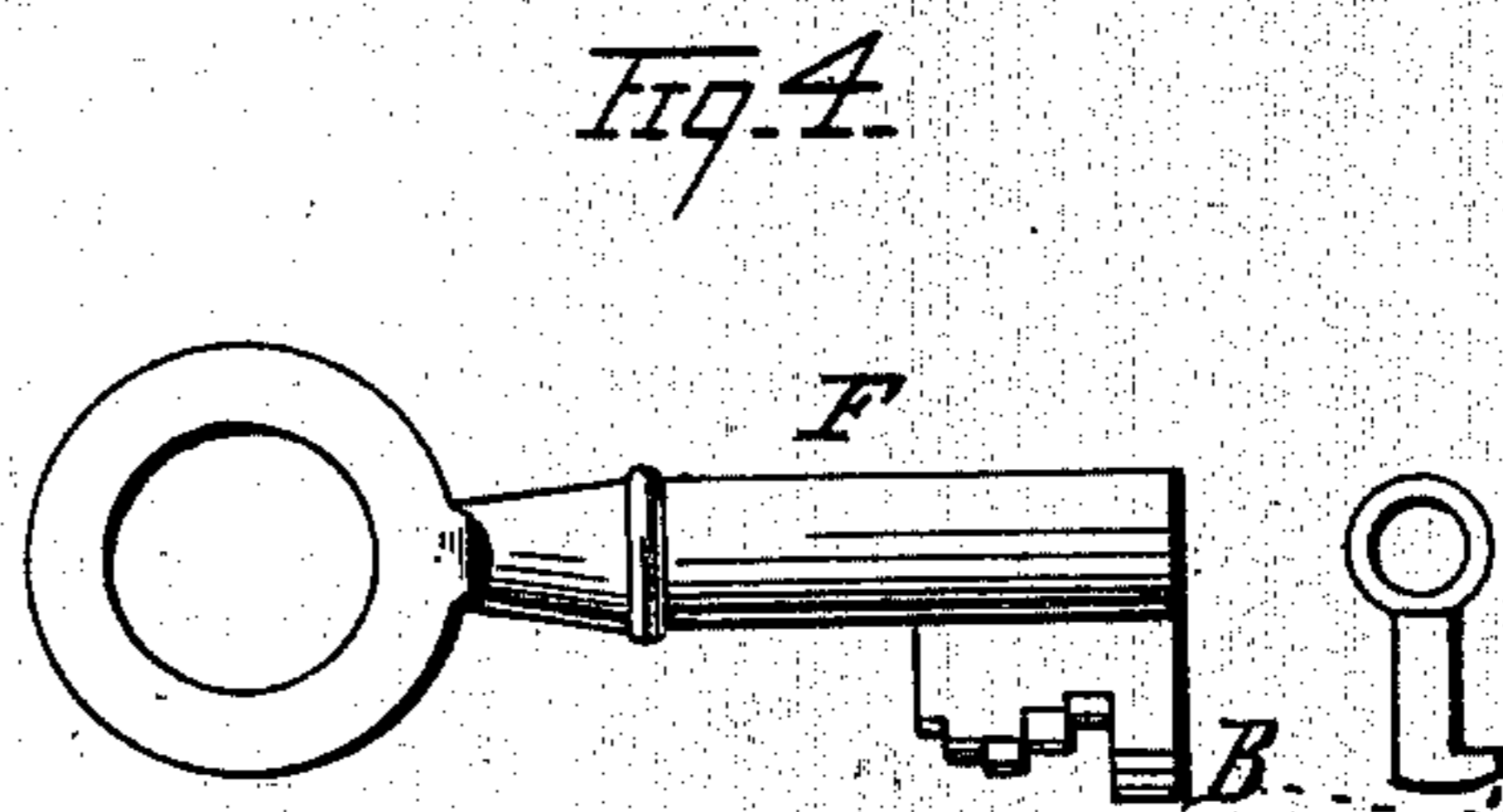
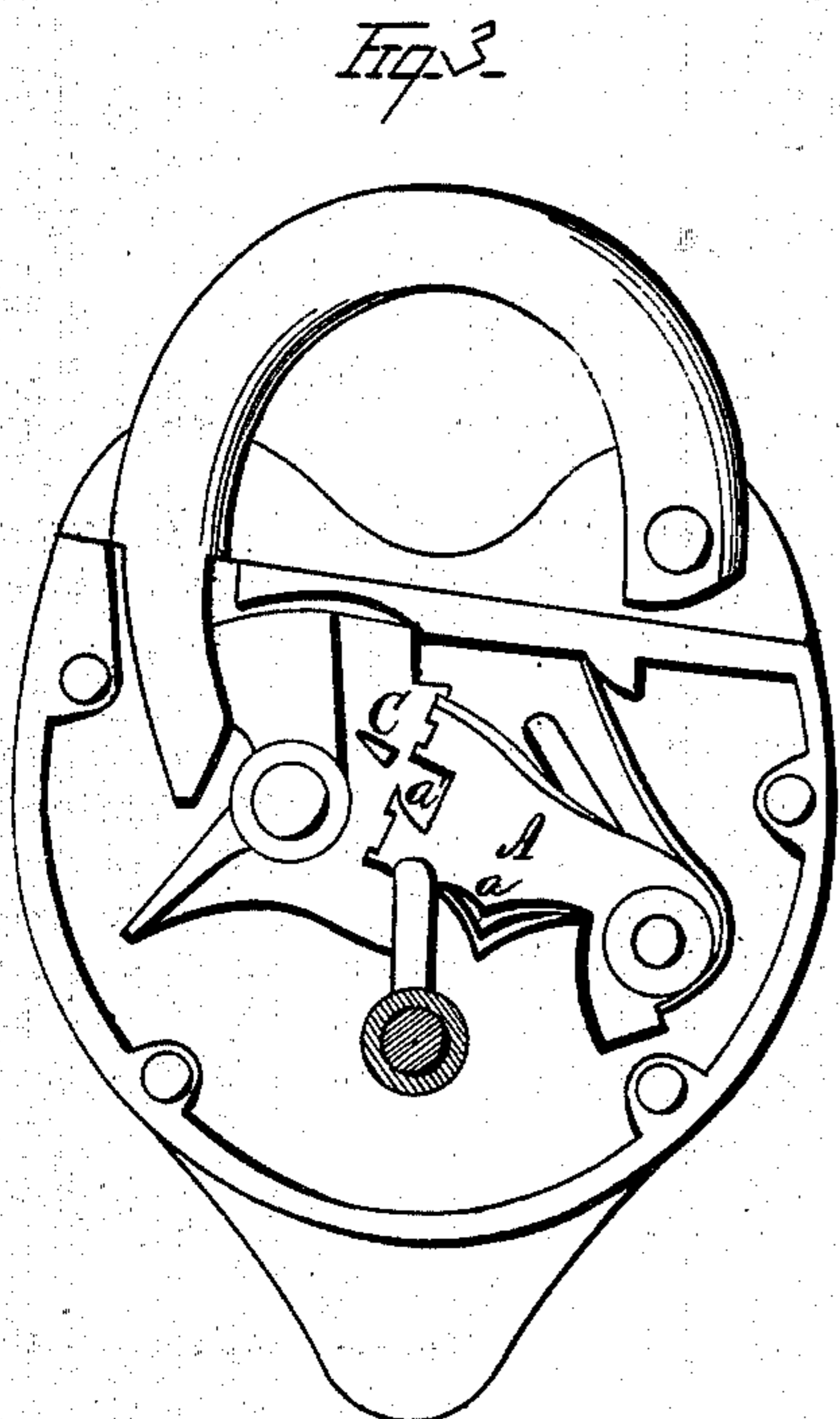
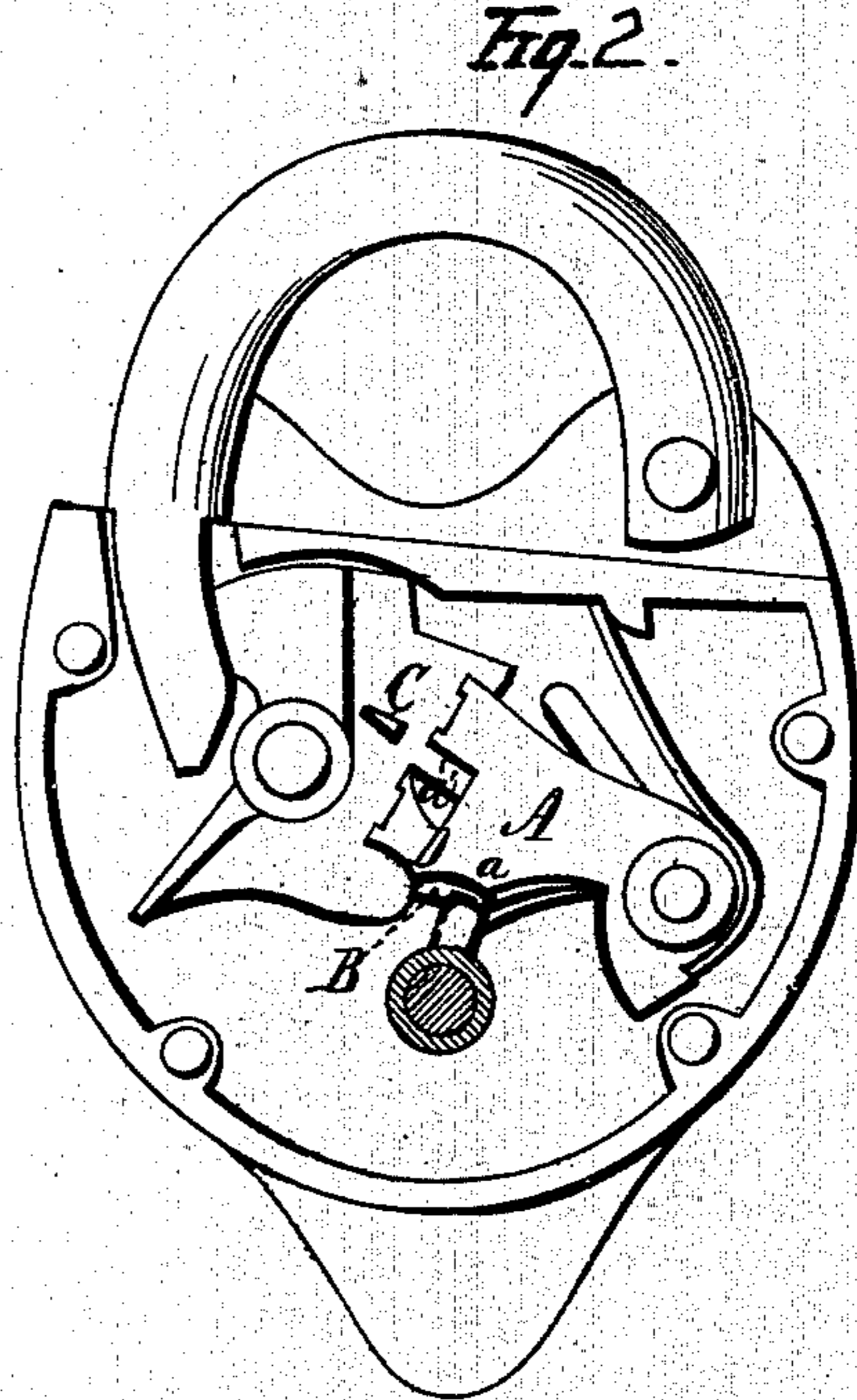
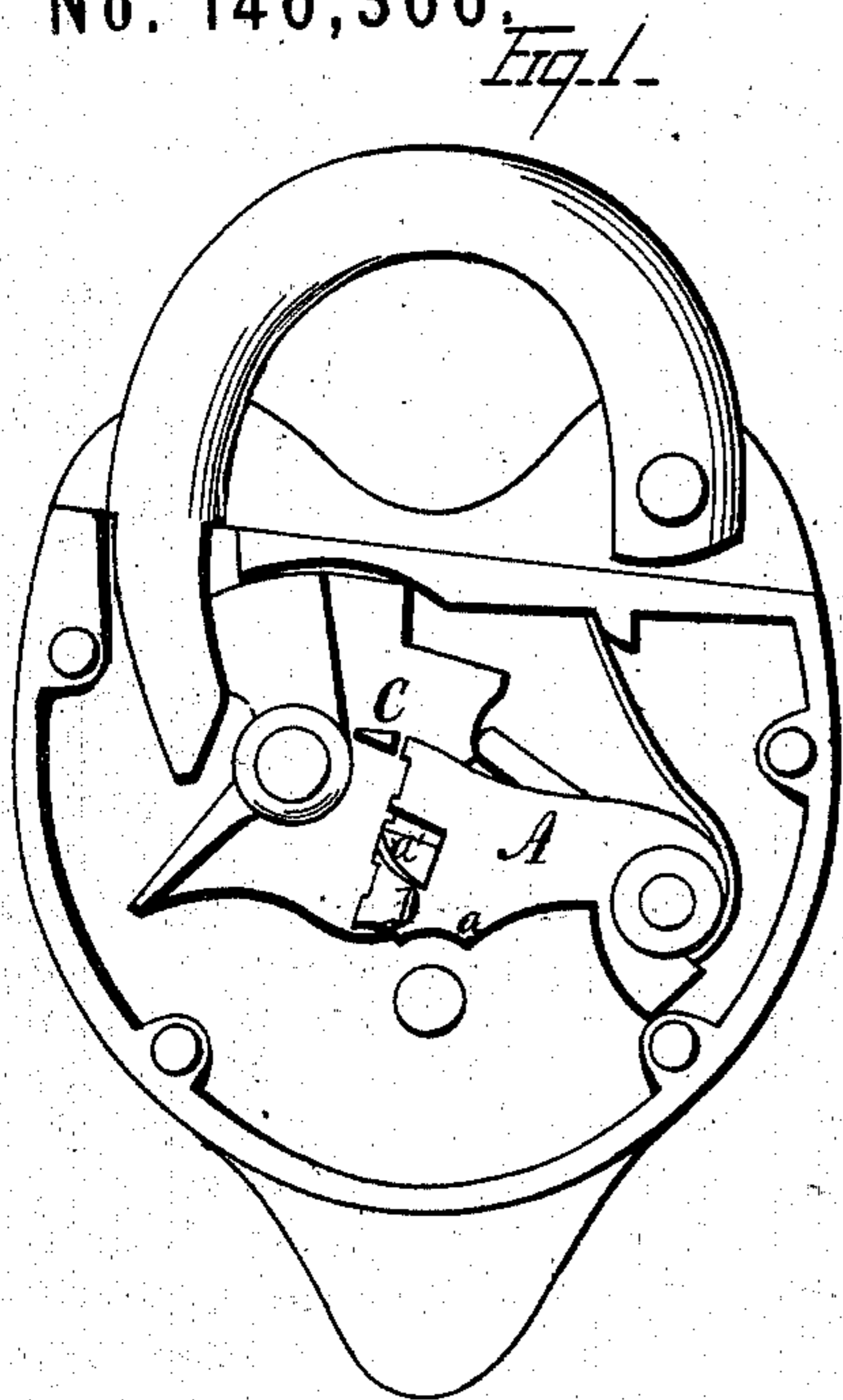


T. SLAIGHT.
Pad-Locks, &c.

No. 146,366.

Patented Jan. 13, 1874.



WITNESSES.

W. J. Newman,
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UNITED STATES PATENT OFFICE

THOMAS SLAIGHT, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN PADLOCKS, &c.

Specification forming part of Letters Patent No. **146,366**, dated January 13, 1874; application filed June 18, 1873.

To all whom it may concern:

Be it known that I, THOMAS SLAIGHT, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Rack-Tumbler Locks; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings which form part of this specification.

In the drawings, Figure 1 is a plan view of a lock embodying my invention, and having the face-plate of the case removed. Fig. 2 is a view of same, showing the regular key in such position that the locking dog or bolt is just ready to be drawn, and the tumbler-mouths are all registered ready to receive the stump or fence. Fig. 3 is a view of the master-key in a similar position. Fig. 4 is a view of the regular key, and Fig. 5 is a view of the master-key.

My invention relates to improvements in the construction of the tumblers, whereby, with a single key-hole, two distinct bellies upon the same edge of each tumbler are employed, one for the regular, and the other for the master-key, so that the master-key may be made entirely different from the regular key, and independent of it, and of any desired form.

The construction of my device is as follows: A represents the tumblers of a self-locking rack-tumbler lock. These tumblers are made flat upon their upper and lower sides, so as to form a solid pile, and present the full thickness of a tumbler opposite to each offset or ward on the key. When locked, as in Fig. 1, the bellies *a* are on a line parallel to the key-shaft, and the irregularities of the regular key F are registered in the mouths *a'*. If the regular key F is now inserted, and its bit brought against the bellies *a*, as in Fig. 2, the tumbler-mouths *a'* will stand in line, ready to receive the stump C of the shackle-bolt. This regular key F must, at this instant, draw the bolt; and to this end it is provided with a toe-piece,

B, which, at this instant, is just touching an arm of the shackle-bolt. As the key F is moved farther, the bolt is immediately drawn, and the stump C enters the mouths *a'*. D is another series of bellies, against which the master-key G operates. These bellies are also cut through the entire thickness of each tumbler, and are formed on the edges of each tumbler, just beyond the bellies that are made for the regular key, so that the entire thickness of a tumbler, A, is presented opposite to each offset or ward of the master-key, so that in the master, as well as in the regular, key each offset is made to operate a tumbler. The bellies D may be cut as widely at variance with the regular key as may be desired, the only requirement necessary being, that when the mouths *a'* are all registered to receive the stump C, the positions of the tumblers along the bellies D shall be made to conform to any assumed arrangement of the wards on the bit of the master-key G. The master-key, however, has no toe-piece B, otherwise it would strike the shackle-bolt too soon. It must be so formed, as shown in Fig. 5, that it will rest against the shackle-bolt just at the instant that it properly registers the mouths *a'*.

It is evident that the regular key F may be suited to the bellies D, and the master-key G to the bellies *a*, if desired.

What I claim is—

In a self-locking lock, the tumblers A, provided with a single set of tumbler-mouths, *a'*, and two bellies, *a* and D, formed upon the same edge of each tumbler, one for the regular key and one for the master-key, so situated and adjusted as to be operated by either key from a single key-hole, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of June, 1873.

THOS. SLAIGHT.

Witnesses:

SAML. W. BOND,
E. E. BOND.