

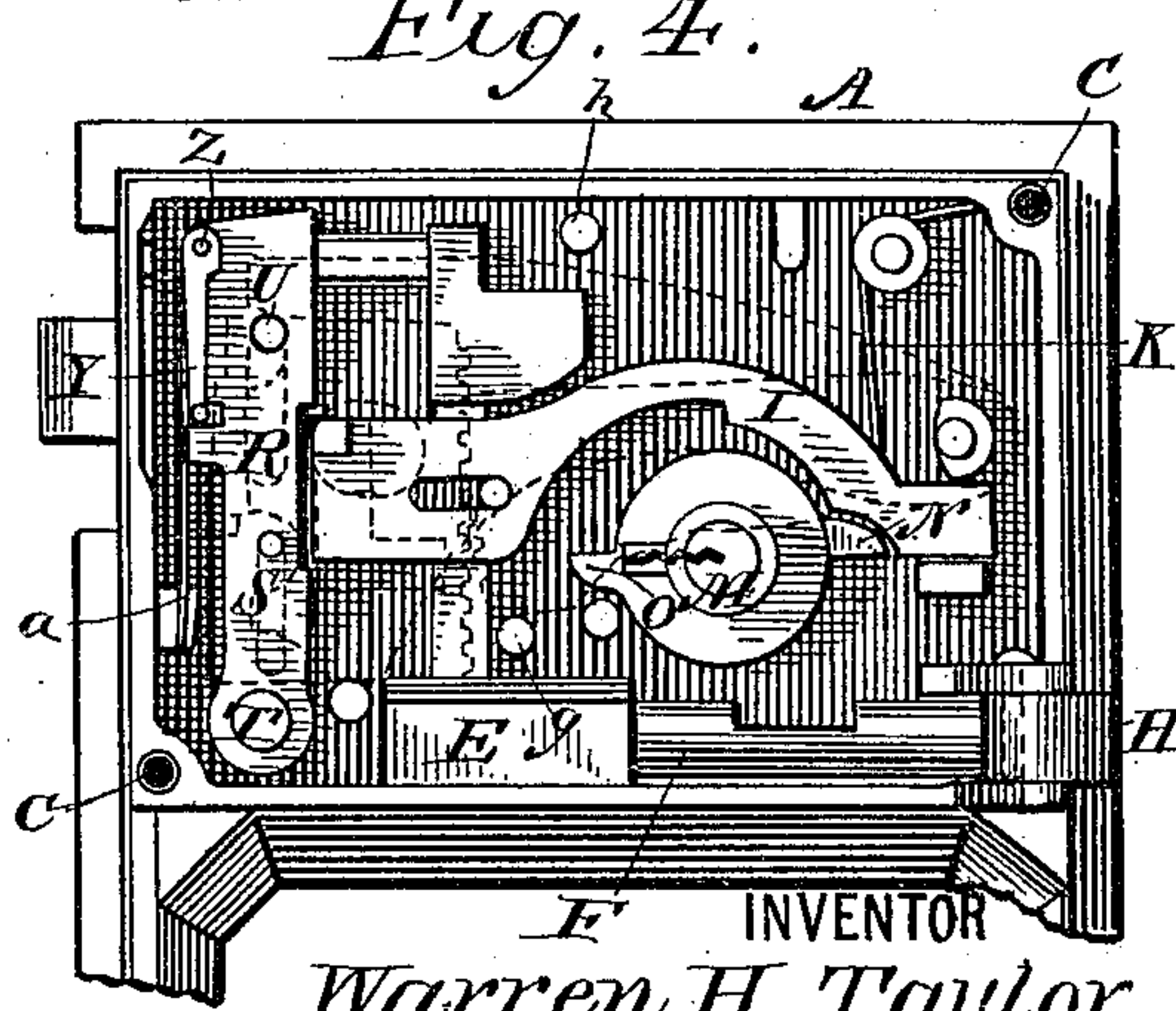
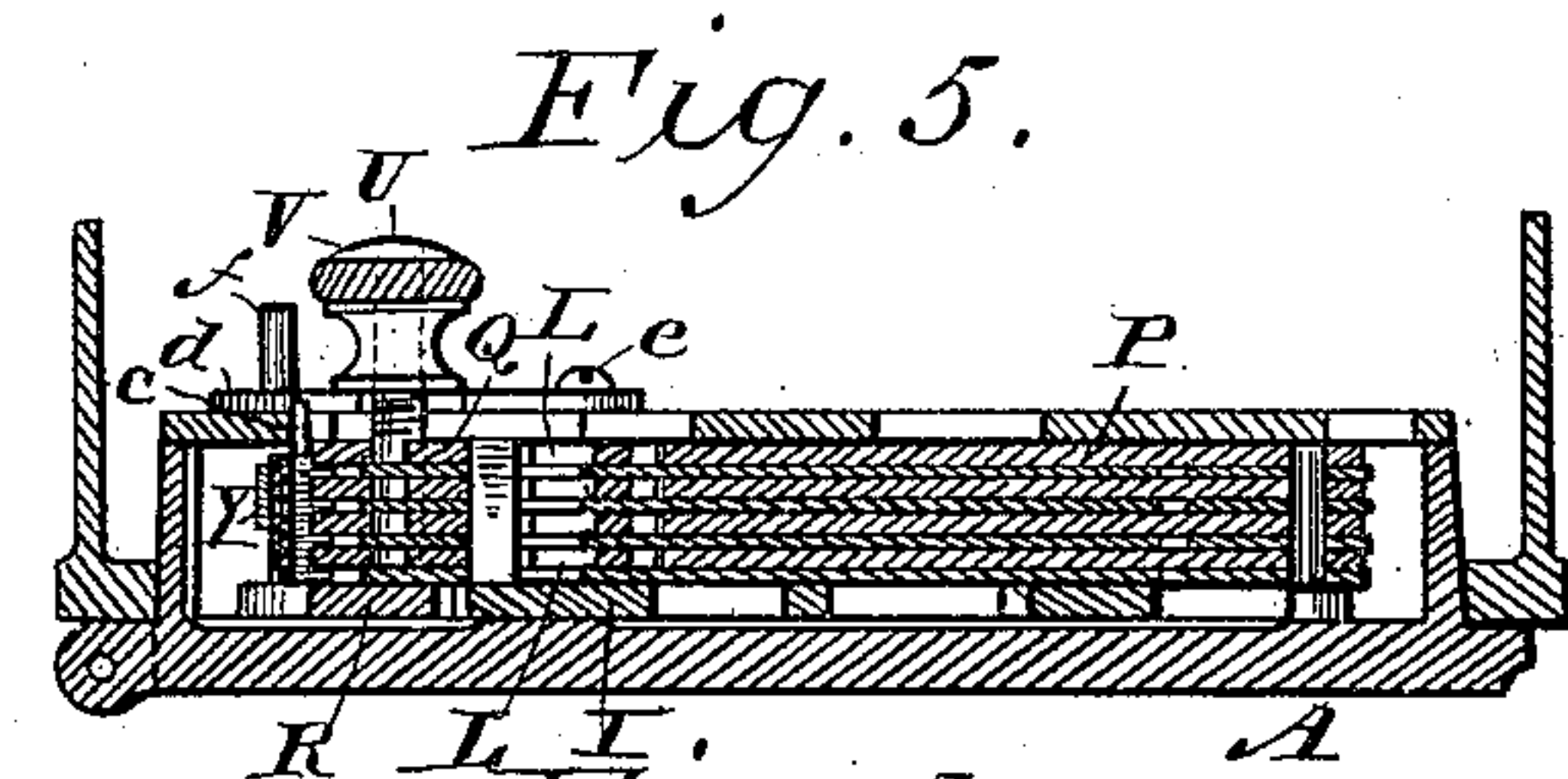
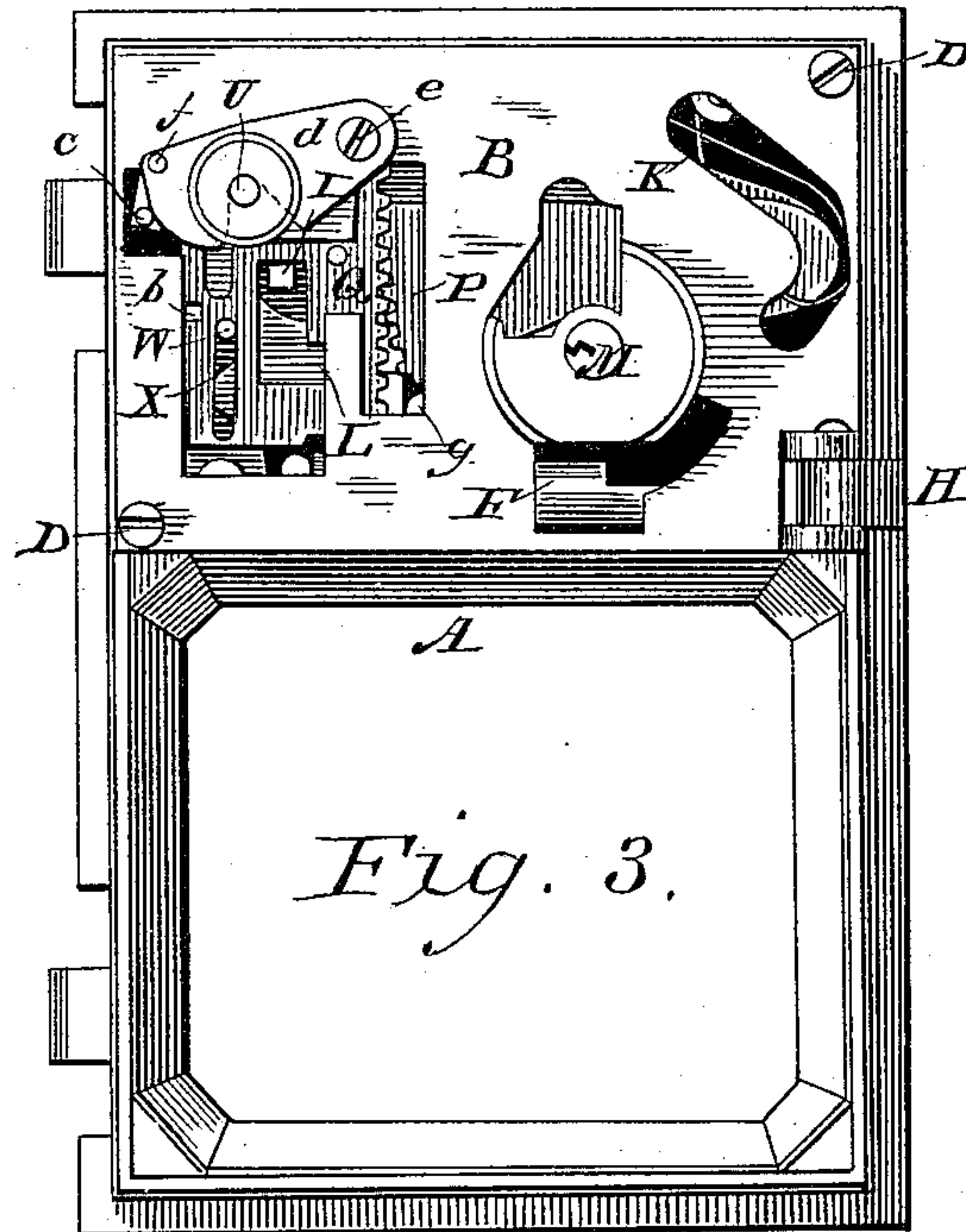
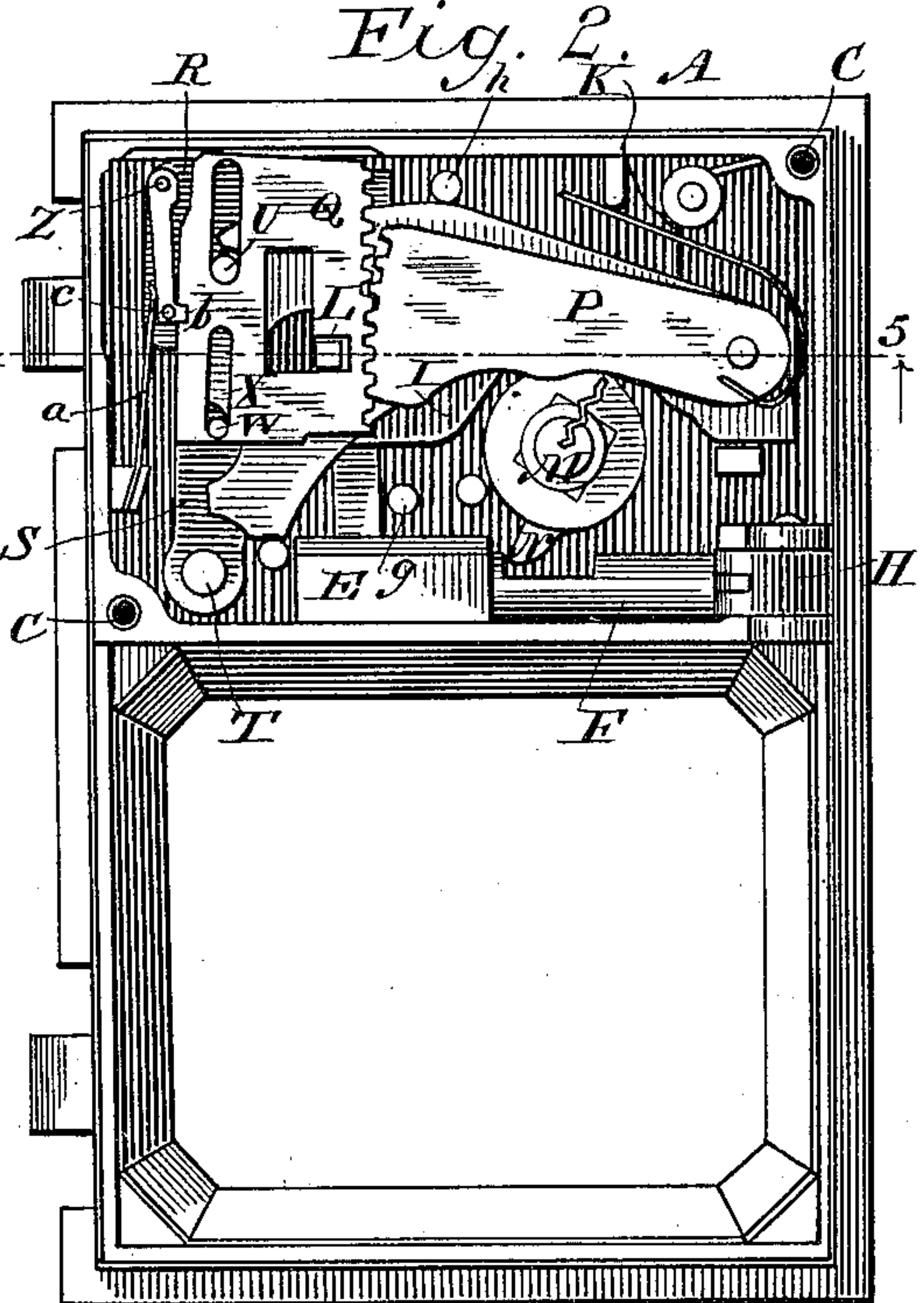
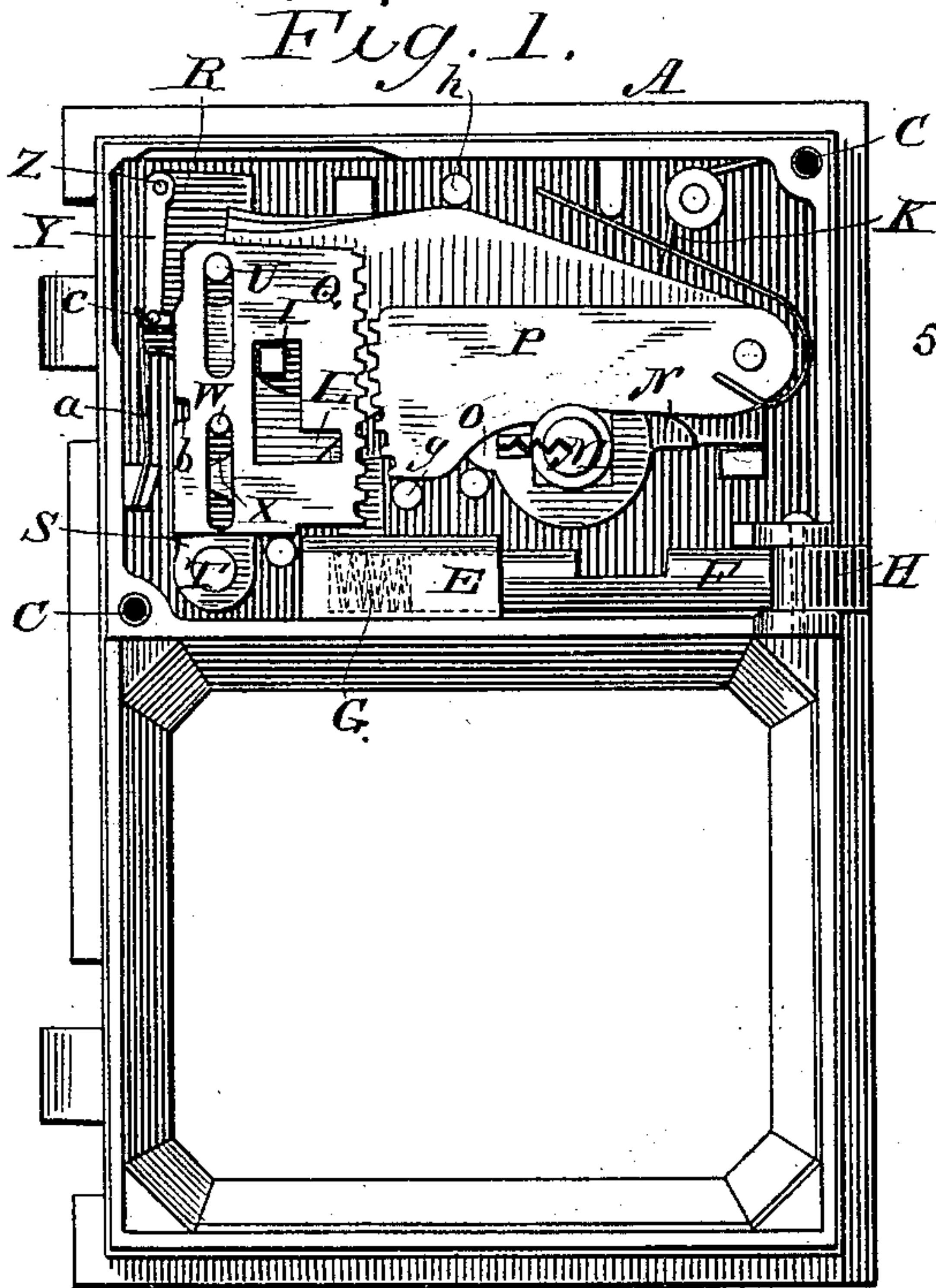
(Model.)

2 Sheets—Sheet 1.

W. H. TAYLOR.
LOCK.

No. 403,706.

Patented May 21 1889.



WITNESSES

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INVENTOR
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Joseph L. Atkins.

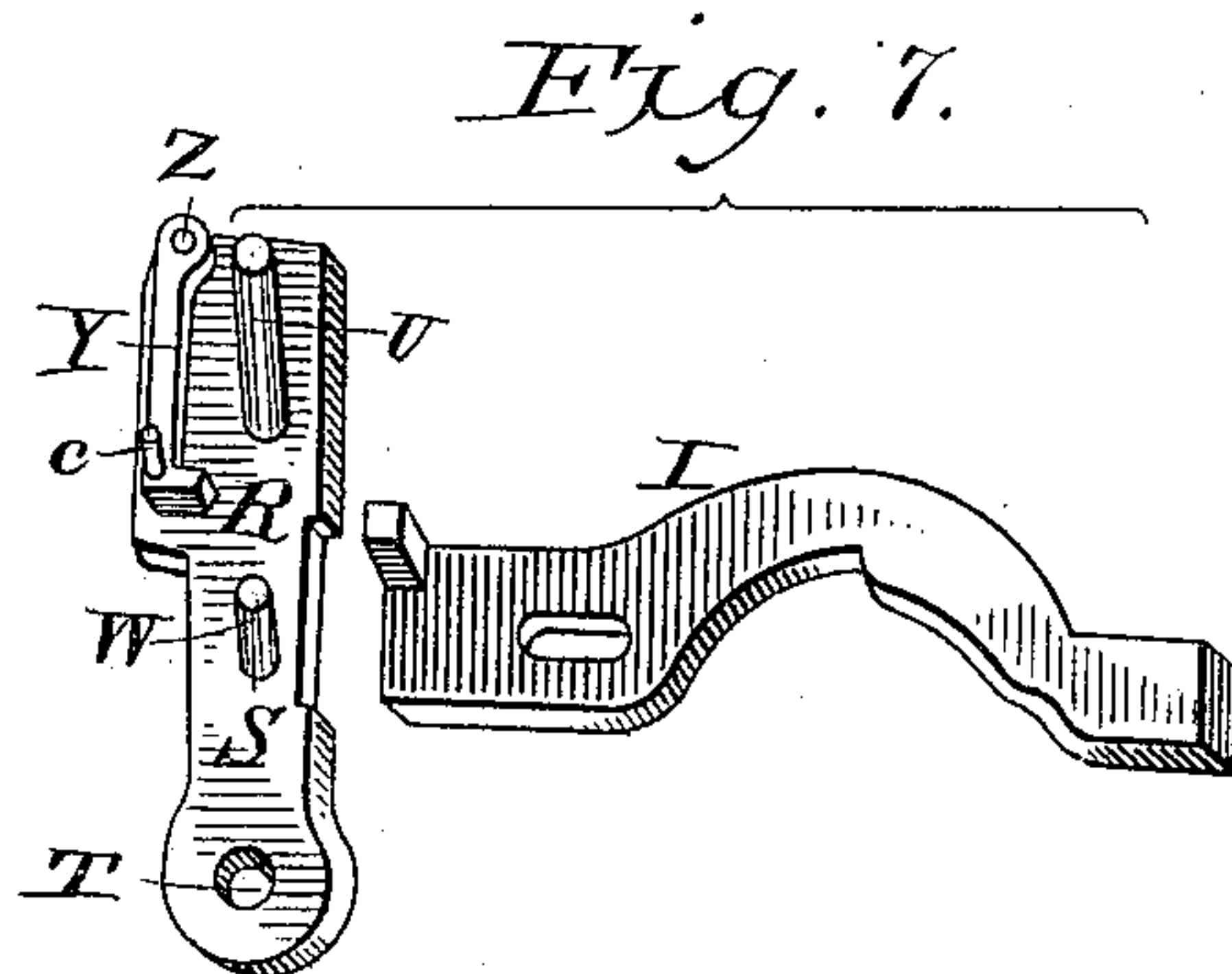
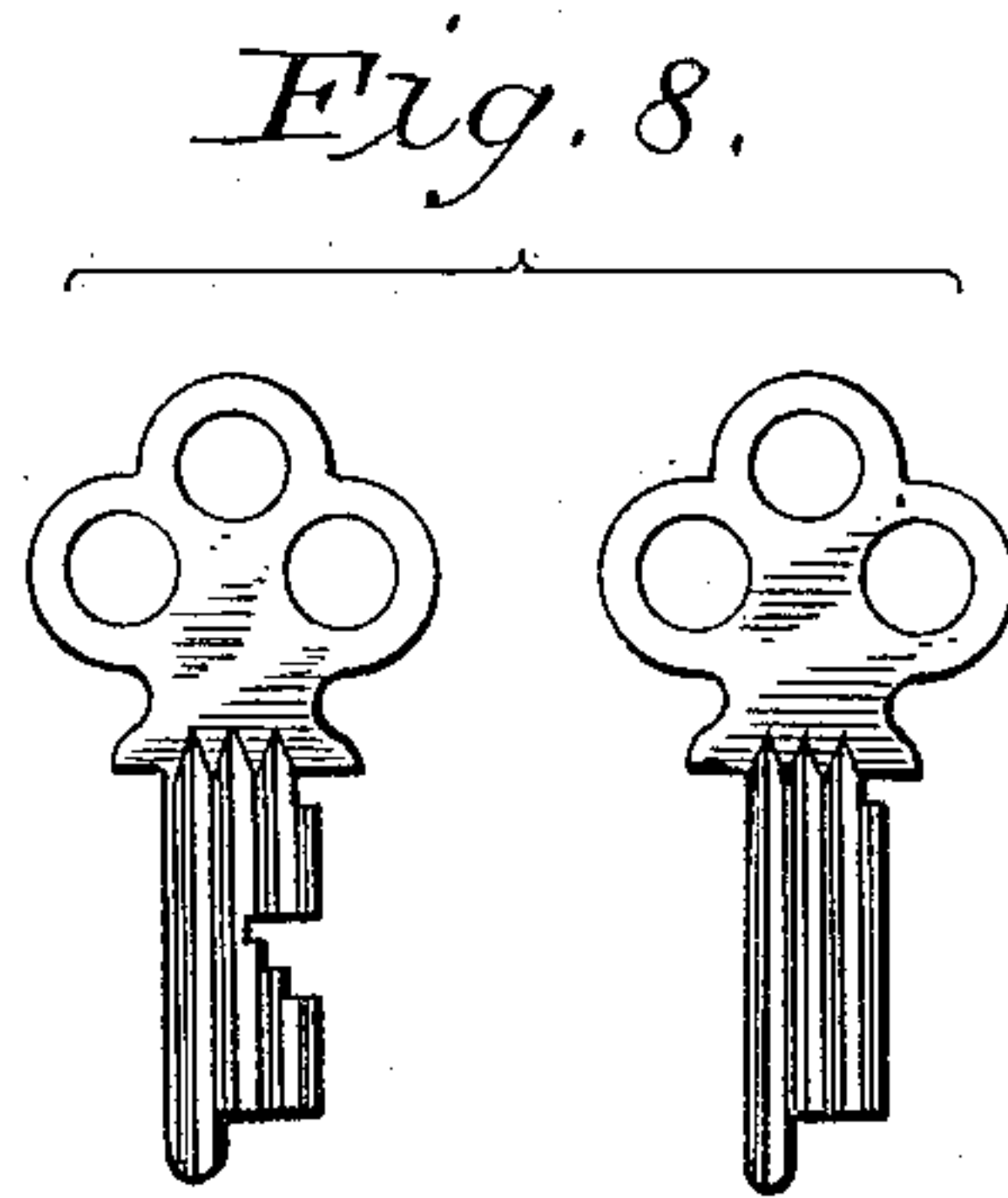
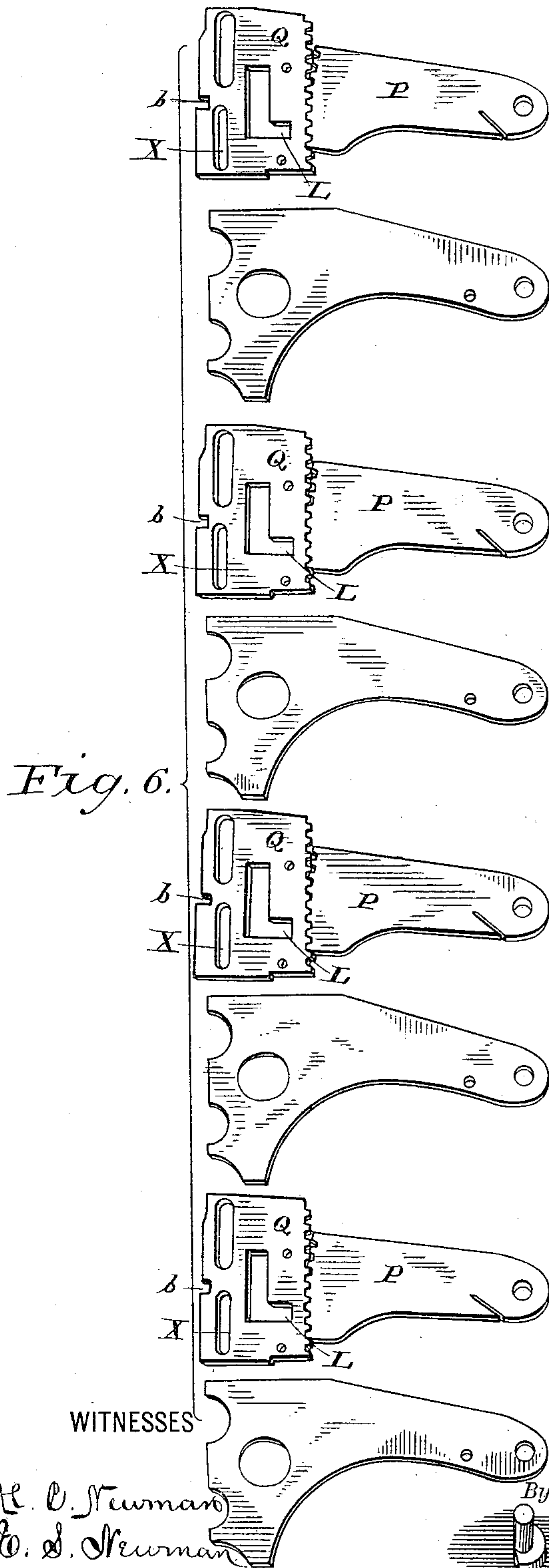
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2 Sheets—Sheet 2.

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No. 403,706.

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UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE
YALE & TOWNE MANUFACTURING COMPANY, OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 403,706, dated May 21, 1889.

Application filed December 10, 1888. Serial No. 293,092. (Model.)

To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new
5 and useful Improvements in Changeable Combination Key-Locks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to that class of locks
10 in which the combination can be set or changed only by the use of the lock-keys. Heretofore in such locks the tumblers, which are each necessarily made in two parts, have to be separated in the ordinary use of the
15 locks, as appears, for example, in United States Patent No. 374,179. The consequence is that wear takes place, which finally results in the relations of the parts of the tumblers being disturbed, so that they will not register
20 perfectly and will not accomplish the objects for which they are designed. This difficulty is not incident to my lock, for the reason that in its ordinary use the parts of the tumblers do not separate, but always work altogether
25 in engagement with one another, except when separated to change the combination, which only seldom occurs.

My invention consists in the organization of parts hereinafter described and succinctly
30 stated in my appended claims.

In order to illustrate my invention, I exhibit in the drawings an entire lock containing, of course, many parts that are old, but necessary to be shown in order to exhibit the structure
35 and operation of my improvements and their proper relations to ordinary lock mechanism when applied to use.

In the drawings, Figure 1 is a view of my improved lock with the cap-plate removed,
40 showing the tumblers disengaged applied to a post-office lock-box door. Fig. 2 is a similar view showing the tumblers engaged and the lock-bolt in the unlocked position. Fig. 3 shows the lock with the cap-plate in place.
45 Fig. 4 is a view of the lock with the tumbler mechanism removed, but indicated in dotted lines merely to show its relative position. Fig. 5 is a section on the line 5 5 of Fig. 2. Fig. 6 is a group of parts in nine divisions, showing
50 them separately in perspective. Fig. 7 is another group of parts in two divisions, showing

the parts in perspective. Fig. 8 is another group of two different keys suitable for my lock.

A indicates a lock-case, and B a cap-plate. 55
The case is provided with corner-lugs C C, to receive the cap-plate-fastening screws D D. The case is also provided with a block, E, for containing the sliding bolt-rod F and its spring G, the rod being pivoted to the pivoted latch- 60
bolt H, as shown.

I indicates a sliding fence provided with a spring, K, tending to keep it out of engagement with the gatings L in the sliding parts
65 of the tumblers.

M indicates a key-hub, and N the cam engaging with the sliding bolt-rod F.

O is another cam for operating the fence.

P indicates pivoted spur-gear spring-tumblers of ordinary construction, adapted to
70 be turned on their pivots by the operation of the key.

Q indicates the sliding parts of the tumblers, which are provided with spur-gearing, as usual in this class of tumblers, composed
75 each of two different parts geared together.

All of the parts of the lock thus far mentioned are of usual construction and need not be further described.

Coming, now, to the peculiar parts of the
80 lock that constitute my invention, it will be observed that the sliding parts of the tumblers are mounted upon an oscillating seat, R, having an arm, S, by which it is pivoted to the case at T. This seat is provided with a post, 85
U, which extends up through the cap-plate, and is provided with a thumb-nut, V, serving as a handle for oscillating the seat and the parts it carries.

W indicates a stud projecting from the os- 90
cillating seat and passing up through slots X in the sliding tumblers, and serving as a guide for them, as does also the post U.

Y indicates a catch pivoted to the oscillating seat at Z, and provided with a spring, a, tend- 95
ing to keep it in engagement with the notches b of the sliding tumblers whenever they are raised to their greatest height.

c is a pin projecting out through the cap-plate from the free end of the catch Y. 100

d indicates a latch pivoted to the cap-plate at e, and provided with a stud, f, for moving

it on its pivot. This latch is adapted to hook around the post U and hold the sliding parts of the tumblers in engagement with the pivoted parts. This latch is also tapered at its 5 end, so as to bear with a wedging or cam action against the pin *c* and force the catch Y back to a position where it will not engage with the notches *b* of the sliding parts of the tumblers. The thumb-nut may be screwed 10 down upon the latch *d* and held in position to fasten the two parts of the tumblers together.

g and *h* are stops to limit the movements of the swinging tumblers P.

15 The operation of my improvements for the purpose of changing the combination and using a new key is as follows: The first thing to do is to unscrew the thumb-nut V and swing the latch *d* out of engagement with the post 20 U and pin *c*. Then by pressing on the thumb-nut V the oscillating seat and the sliding parts of the tumblers can be swung to one side and held by the catch Y, so that the tumblers will not be in engagement by their spring-gearing. Then the pivoted parts of the tum- 25 blers will swing by force of their springs against a suitable stop, *g*. A new key being inserted will swing and adjust the pivoted parts of the tumblers according to the shape 30 of its bittings. The sliding parts of the tum-

blers should now be swung back again by means of the thumb-nut V, so as to engage with the pivoted parts. The latch *d* should now be swung down, so as to hook around the 35 post U and press the catch Y out of engagement with the tumbler-notches. The thumb-nut should be screwed to place, and the lock will then be adjusted and fastened to the proper position to operate on a combination 40 for the new key.

What I claim to be new is—

1. The combination, with the pivoted oscillating seat, of the sliding tumblers carried thereby, the sliding fence, the pivoted spring-catch Y, for engaging with the notches in the 45 sliding tumblers, the pin *c*, and the latch *d*, substantially as set forth.

2. In a changeable combination key-lock, the combination of one or more tumblers in parts, an oscillating seat which carries one part of 50 said tumblers, and a latch, whereby the said part may be separated from the other and held by said latch ready for resetting to a new combination, substantially as set forth.

In testimony of all which I have hereunto 55 subscribed my name.

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,

HOWARD L. UNDERHILL.