

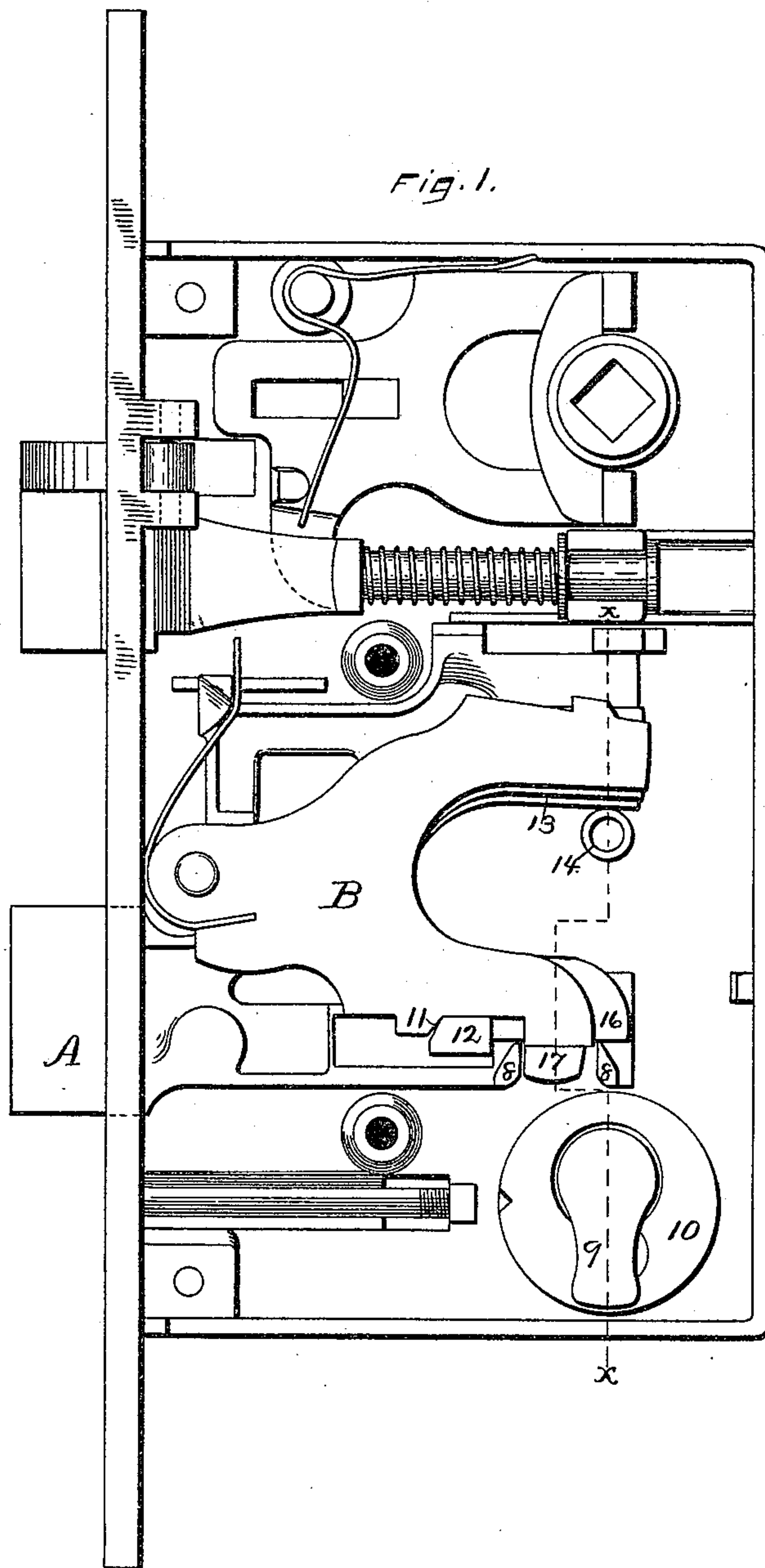
(Model.)

H. E. RUSSELL, Jr.  
MASTER KEY LOCK.

3 Sheets—Sheet 1.

No. 438,188.

Patented Oct. 14, 1890.



WITNESSES.  
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(Model.)

3 Sheets—Sheet 2.

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Fig. 2.

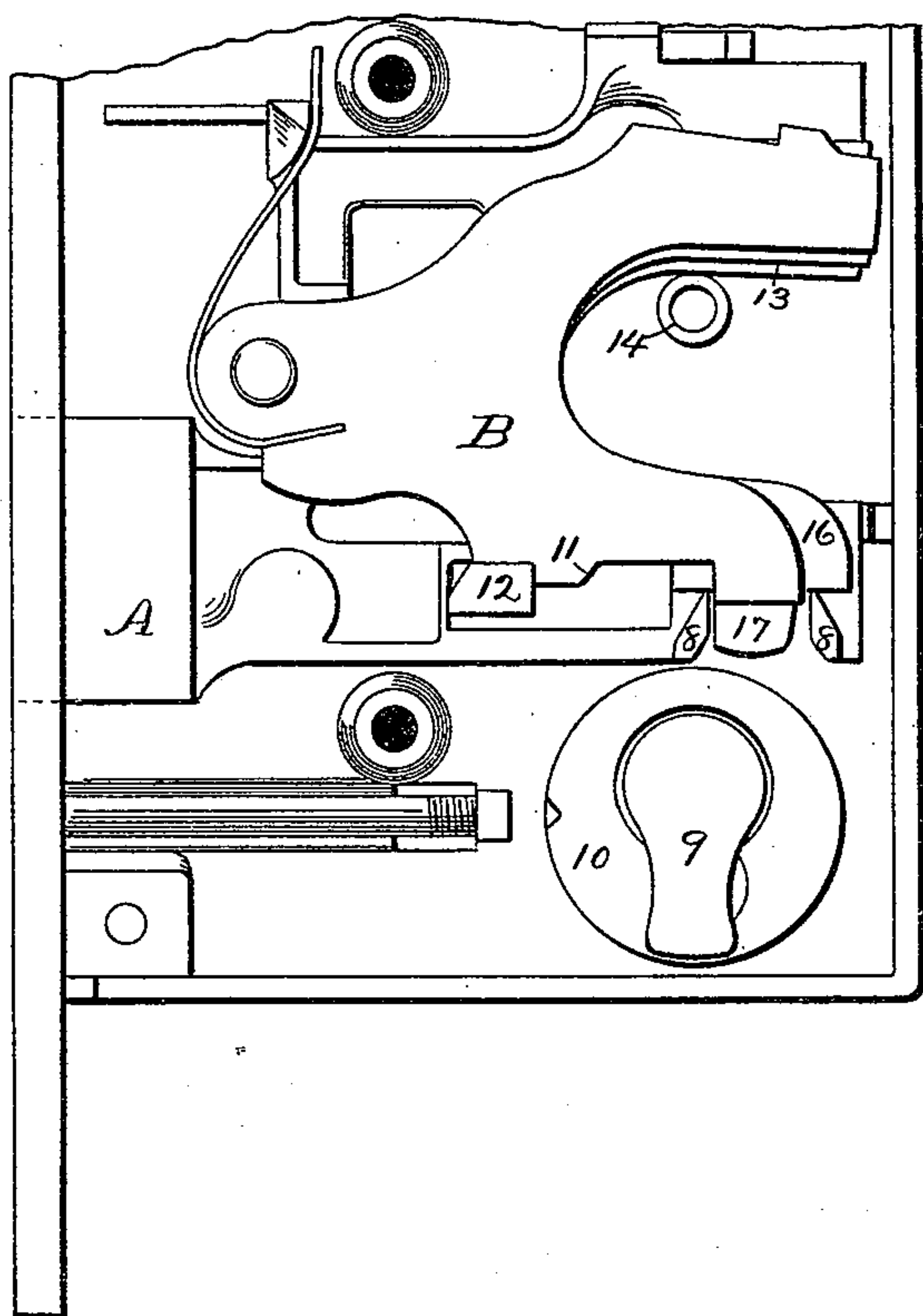


Fig. 3.

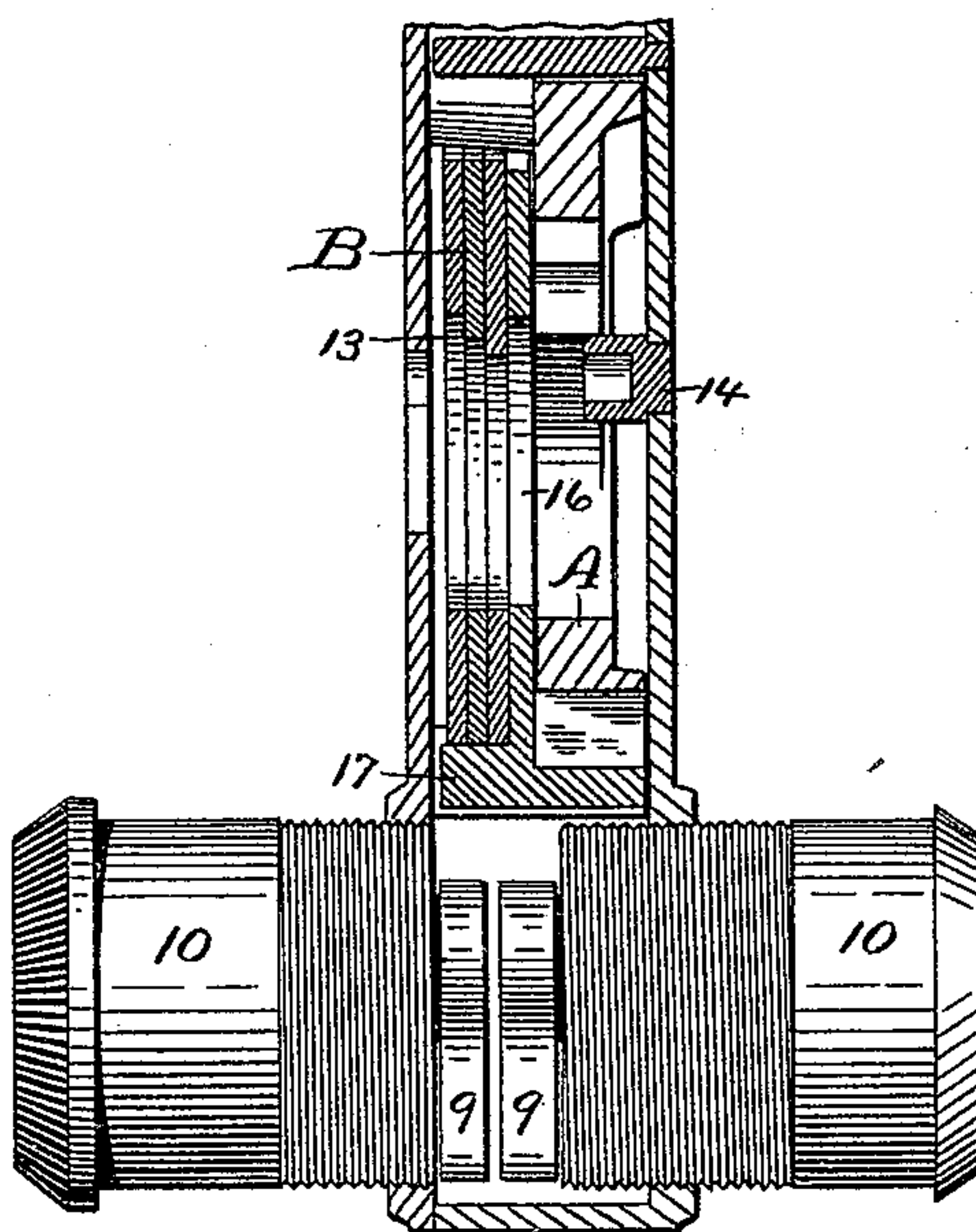
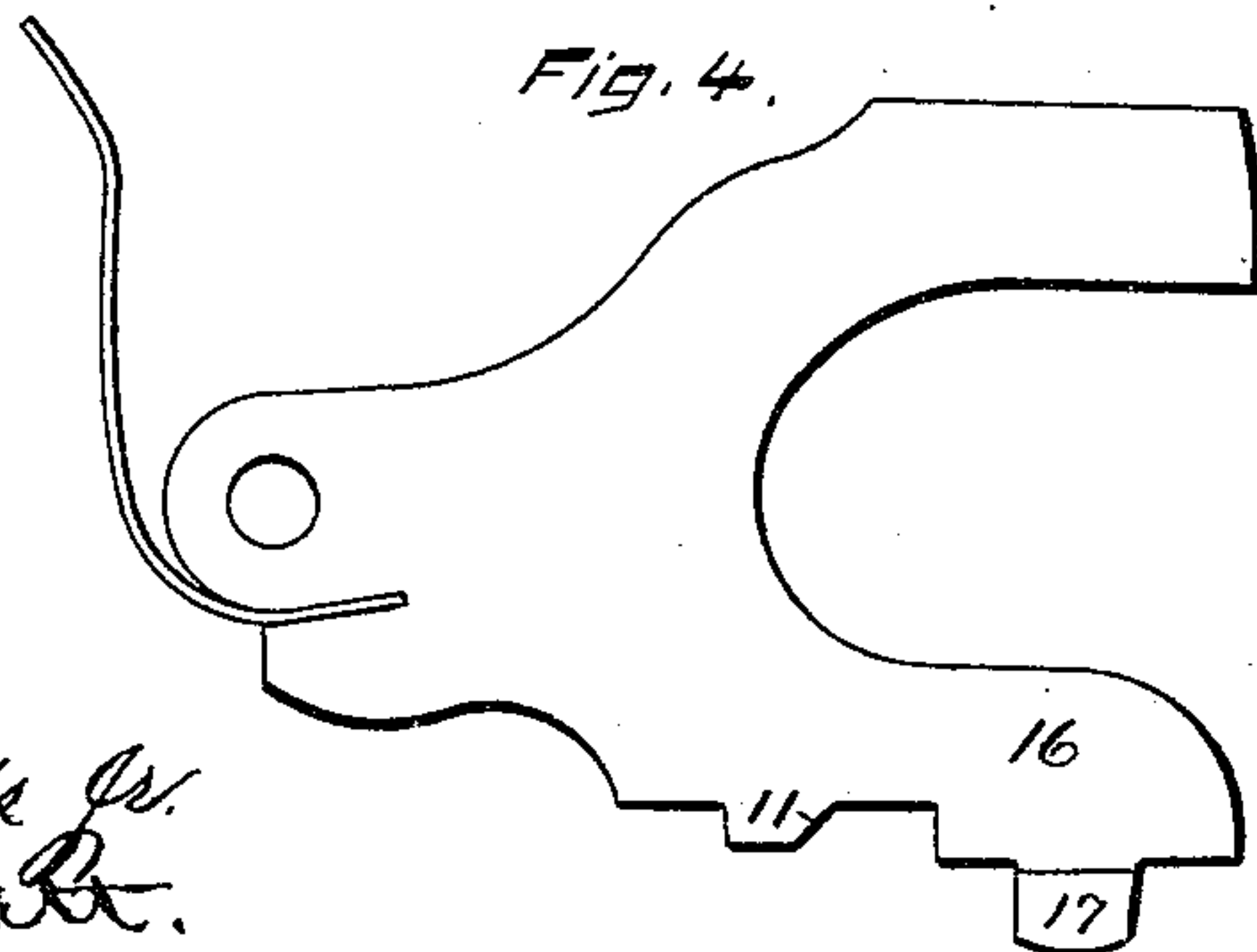


Fig. 4.



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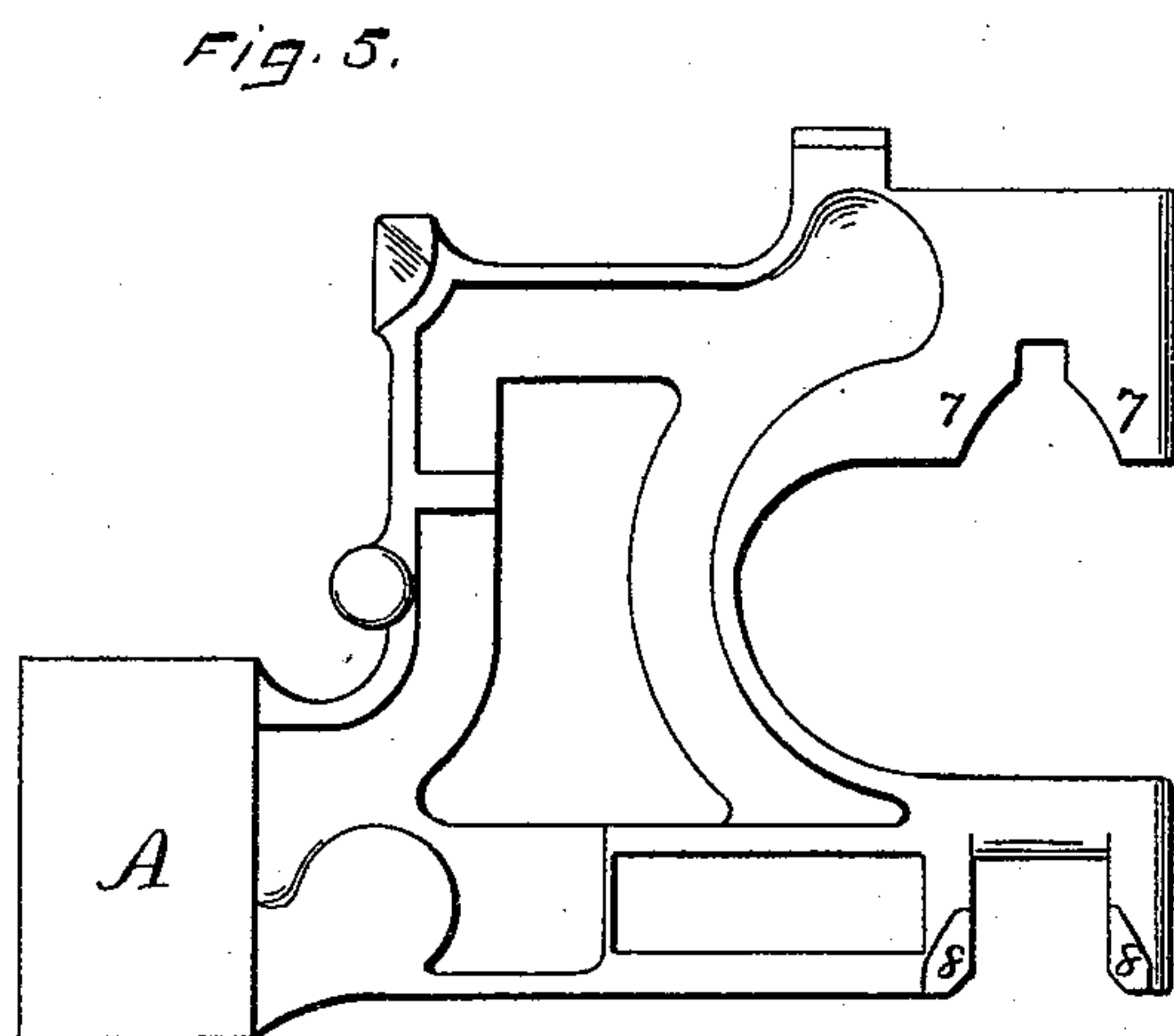
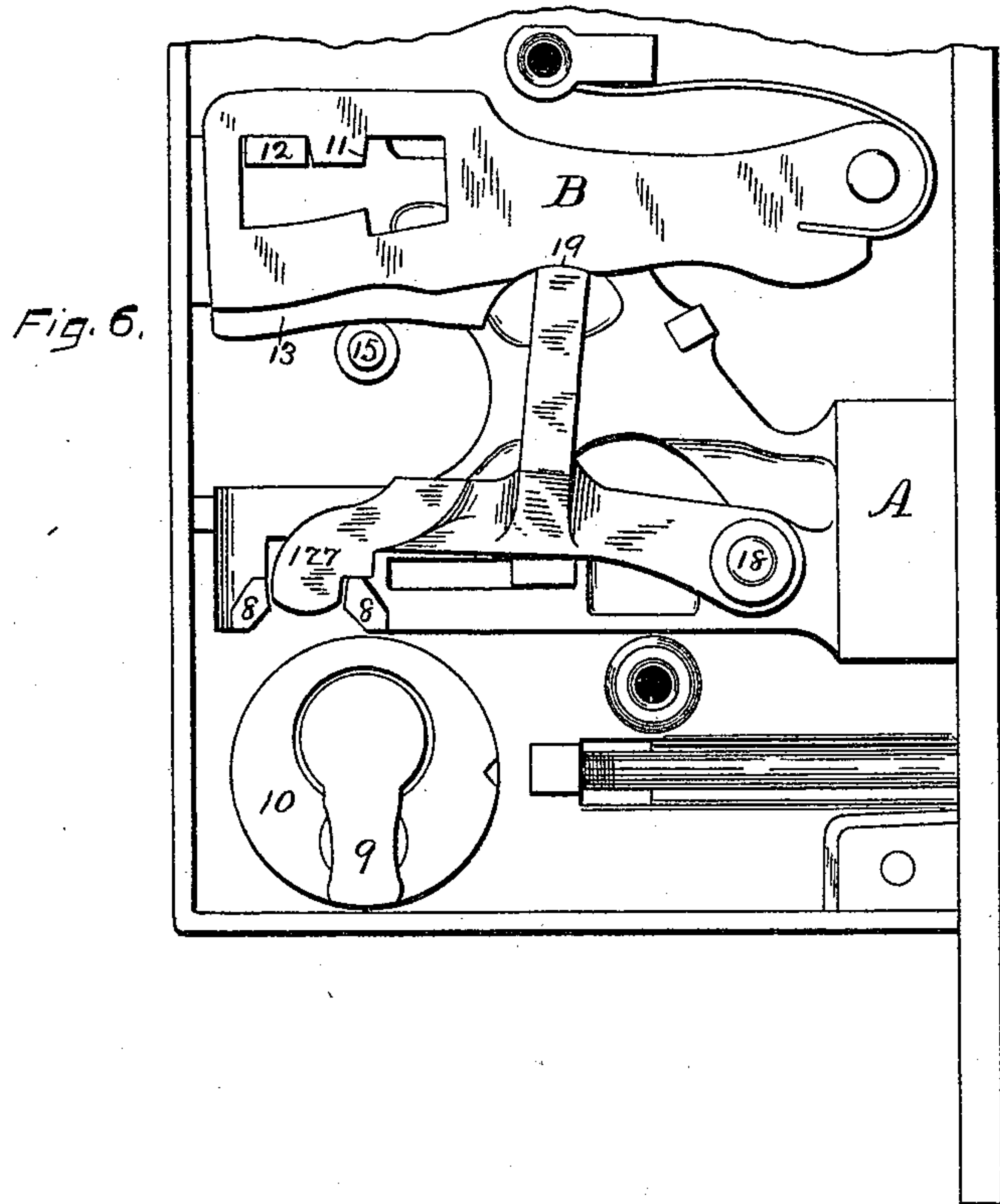
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3 Sheets—Sheet 3.

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MASTER KEY LOCK.

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# UNITED STATES PATENT OFFICE.

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## MASTER-KEY LOCK.

SPECIFICATION forming part of Letters Patent No. 438,188, dated October 14, 1890.

Application filed March 11, 1890. Serial No. 343,452. (Model.)

*To all whom it may concern:*

Be it known that I, HENRY E. RUSSELL, Jr., a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Master-Key Locks, of which the following is a specification.

My invention relates to improvements in master-key locks; and the objects of my improvement are to improve the convenience and general efficiency of the lock, and in particular to make a clear distinction between the master-key and individual keys.

In the accompanying drawings, Figure 1 is a front elevation of my lock with the cap-plate removed, the lock-bolt being thrown outwardly. Fig. 2 is a front elevation of a portion of the same with the lock-bolt withdrawn. Fig. 3 is a vertical section on line *xx* of Fig. 1. Fig. 4 is a front elevation of one of the tumblers. Fig. 5 is a detached front elevation of the lock-bolt, and Fig. 6 is a front elevation of my lock in a somewhat modified form.

A designates the lock-bolt, the same being shown separately in Fig. 5, and it is provided with talons 7 for being directly acted upon by the key, and also with talons 8 for being acted upon by the tumbler-locked key-actuated mechanism 9, mounted within the lock-cylinder 10, which is formed separately from the case and secured thereto, the interior mechanism and keys of which cylinder may be of any ordinary construction for this well-known class of locks. The hub or cam is locked by means of tumblers within the cylinder 10, which tumblers are released by the key, so that the key-actuated mechanism 9 is not merely moved by the key, but its tumblers are key-actuated preparatory to its movement in throwing the bolt. I also provide said lock-bolt with a series of tumblers B, having shoulders 11, for engagement of a stationary stud 12 on the lock-case to prevent the bolt from being withdrawn, except when the tumblers are properly lifted, all substantially as in ordinary locks having plate-tumblers acted upon by the direct action of the key, the tumblers, as usual, being provided with edge faces

13 to be acted upon by the wing of the key. The bearing for one end of this key in Figs. 1, 2, and 3 is in the form of a socket 14, adapted to receive the end of the stem of a solid key, while in Fig. 6 it is in the form of a pin 15, which is adapted for a drilled key.

The key-holes for application of the proper keys for the plate-tumblers and the key-actuated mechanism are both on the same side of the lock-case.

In the preferred form I operatively connect the tumblers B with the key-actuated mechanism 9 by having one of the tumblers 16 provided with a carrier 17, which is rigidly attached to said tumbler, and upon the upper face of which carrier all of the other tumblers rest. The lower part of this carrier 17 lies within the space between the talons 8 8, whereby whenever the key-actuated mechanism 9 is released and revolved by the application of a proper key it engages said carrier 17 and lifts all of the tumblers B, so that it may throw the bolt. When a key is applied to act upon the talons 7 7, the tumblers are lifted by the direct action of the key. Thus it will be seen that the bolt may be thrown either by the application of a key which acts directly upon the tumblers and lock-bolt or by the application of a key to release and act upon the key-actuated mechanism, and these two keys will ordinarily be very different in form and construction, and either one of them may be made a master-key, so as to operate a given number of locks, while the other may be made a change key or individual key capable of operating only the particular lock for which it was designed.

In Fig. 6, instead of making the carrier integral with one of the tumblers, I make the carrier 17 of a separate piece and pivot it to the lock-bolt at 18. As in the construction first described, its lower part rests between the talons 8 8, and all of the tumblers rest upon its upper edge, said edge in Fig. 6 being designated 19, whereby whenever the key-actuated mechanism 9 is operated to throw the bolt all of the tumblers in the series B will be properly lifted.

I claim as my invention—

1. The combination of a case, a series of

plate-tumblers adapted to be acted upon by the direct application of a key, a cylinder formed separately from the lock-case, a set of tumblers and key-actuated mechanism mounted within said cylinder, and a lock-bolt, the plate-tumblers and key-actuated mechanism both being accessible to the proper keys from the same side of the lock-case, substantially as described, and for the purpose specified.

2. A lock-bolt having talons and tumblers for the direct application of a key and talons for a key-actuated mechanism, in combination with a key-actuated mechanism, and a carrier adapted to be operated by said key-actuating mechanism for operating the tumblers, substantially as described, and for the purpose specified.

HENRY E. RUSSELL, JR.

Witnesses:

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