

No. 711,376.

Patented Oct. 14, 1902.

C. BAYER.

LOCK.

(Application filed Mar. 14, 1902.)

(No Model.)

Fig. 1.

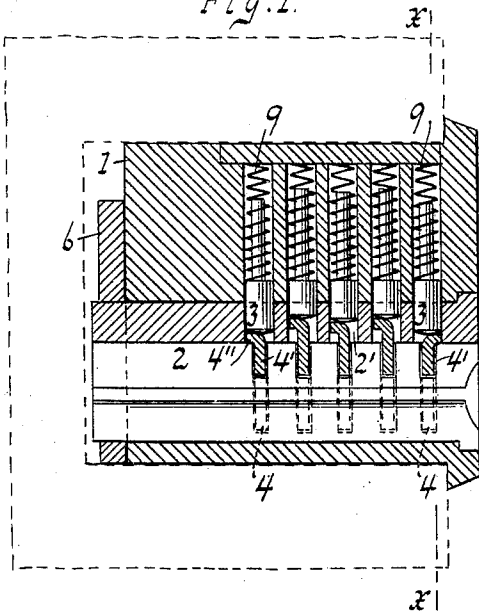


Fig. 3.

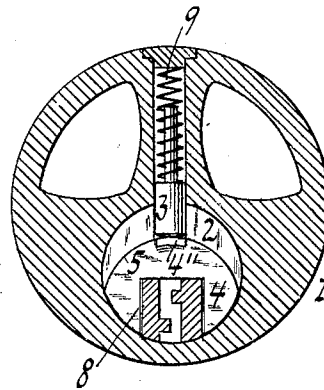


Fig. 4.

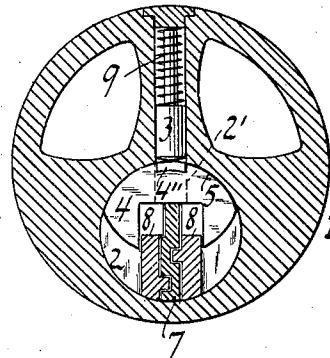


Fig. 2.

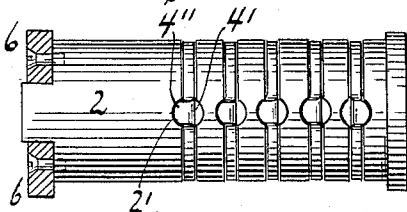


Fig. 5.

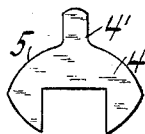
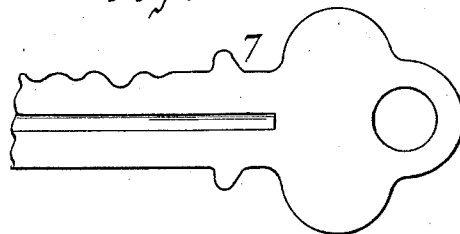


Fig. 6.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHRISTIAN BAYER, OF NEW YORK, N. Y.

## LOCK.

SPECIFICATION forming part of Letters Patent No. 711,376, dated October 14, 1902.

Application filed March 14, 1902. Serial No. 98,224. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTIAN BAYER, a citizen of the United States, residing at Manhattan borough, New York city, in the county and State of New York, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to what are generally known as "cylinder-locks;" and the invention resides in certain features of construction possessing such advantages as cheapness or simplicity, as also security against picking.

This invention is set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a sectional side elevation of a lock embodying this invention. Fig. 2 shows a plan view of the barrel. Fig. 3 is a section along *x x*, Fig. 1, the key being withdrawn. Fig. 4 is a view like Fig. 3, the key being inserted. Fig. 5 shows a tumbler. Fig. 6 shows a piece of a key.

The cylinder is shown at 1 and is suitably secured in the wood or material, as of a door. Within this cylinder is the barrel 2, which being of smaller diameter takes up but part—say one-half—of the space of the cylinder, the remaining space being used for placing the pins or spring-plungers 3. Within the barrel 2 are located the flat tumblers 4. These tumblers have stop-shoulders 5. The purpose of these shoulders is to prevent the entire tumbler from entering the spring-plunger chamber in the cylinder. This frustrates the attempts of lock-pickers, whose method is to move the tumblers up into the cylinder-chamber, so as to get them out of the barrel, whereupon the latter, being free of tumblers, can be readily turned to release bolt 6, which is suitably attached to the barrel.

When the key 7 is inserted, the several tumblers rise as they come to sit on the various ridges of the key, respectively, and they being correspondingly cut their heads 4' aline with the circumference of the barrel, so as to displace the plungers and permit the barrel to be turned. (See Figs. 1 and 3.) When the key is withdrawn, the tumblers drop until they straddle what may be called "walls" of the keyhole or passage, as seen at 8, Fig. 4.

This causes pins 3 to plunge by reason of springs 9 into the tumbler-seats of the barrel, the seats being suitably formed or rounded for this purpose, as seen at 2', Figs. 2 and 4.

To steady the tumblers 4, their heads may be provided with offsets 4'', which, resting against the walls of seats 2', keep the tumblers from rattling when the key is withdrawn.

The tumblers being flat can be readily stamped or shaped from a piece or sheet of metal. The movement of a tumbler toward and from its spring-plunger can be called an "endwise movement," and the plunger is guided in this movement so as to be held against any lateral or other movement.

The shoulder or fan-shaped portion of the tumbler is shown forked or with shanks which can straddle or be guided by the barrel. The shanks can be more or less separated, so as to be guided by the outside of the barrel, Figs. 3 to 5. These tumblers are fixed to their flare or shoulder portions or rather formed integral therewith, and the whole can be readily cut or stamped out. The bent portion or nose 4'' is readily formed by bending the end of the tumbler to form the required offset or shoulder.

The spring-plungers 3 are shown with a neck or guard portion extended into the coil-spring and preventing the pin, or rather its spring-supporting shoulder part, being forced so far up or into the chamber or cylinder as to crush the spring.

What I claim as new, and desire to secure by Letters Patent, is—

1. A lock comprising a cylinder having a barrel therein, flat tumblers loosely located in said barrel and straddling the walls of the key-slot, and spring-plungers independent of the tumblers but normally exerting a downward pressure thereon.

2. A lock comprising a cylinder having a barrel therein, flat tumblers loosely located in said barrel and straddling the walls of the key-slot, offsets formed integral with said tumblers, spring-plungers normally exerting a downward pressure on the tumblers, and necks or guards formed with the plungers to prevent damage to the springs when the lock is tampered with.

3. A lock comprising a cylinder having a barrel therein, a flat tumbler loosely located in said barrel and straddling the walls of the key-slot, said tumbler having shoulders to prevent same being forced out of the barrel, and a spring-plunger normally exerting a downward pressure thereon.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHRISTIAN BAYER.

Witnesses:

CHAS. E. POENGEN,  
E. F. KASTENHUBER.