Feb. 26, 1924. 1,484,757

W. T. CONEY

PIN CYLINDER LOCK

Filed June 27, 1922

Fig. 1.

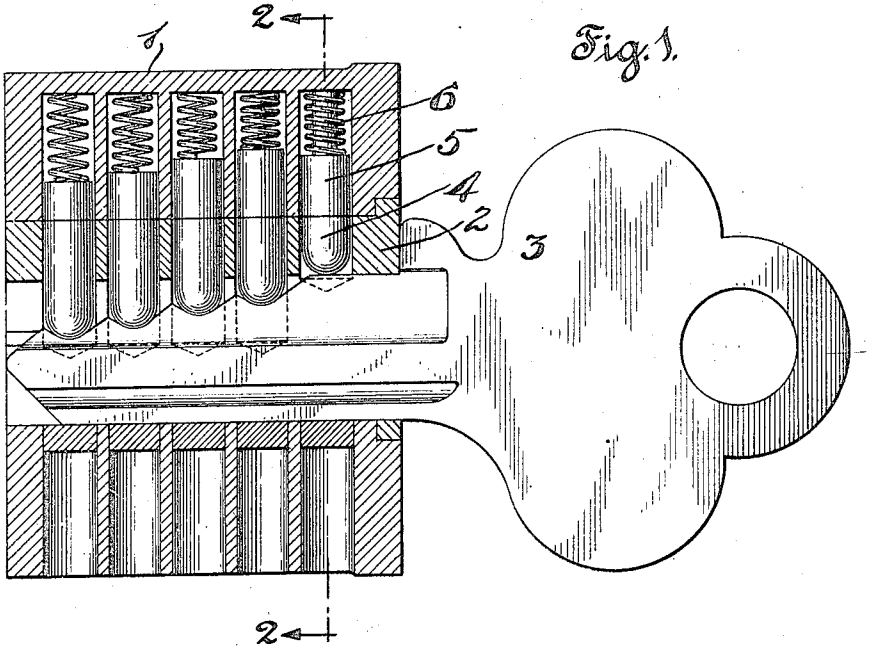
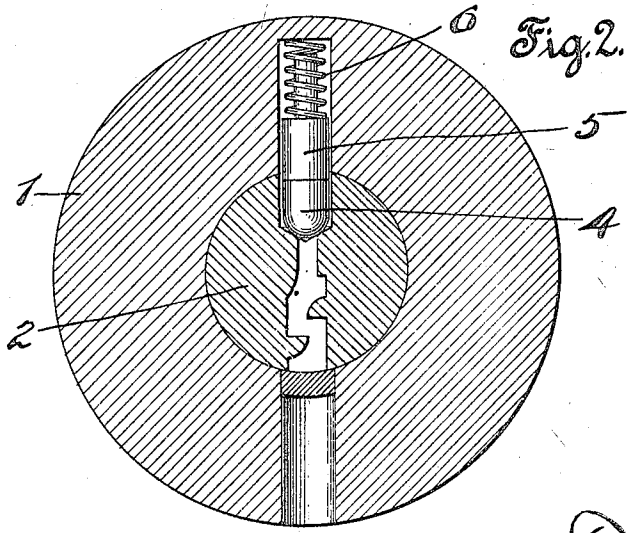


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM T. CONEY, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE AMERICAN HARDWARE CORPORATION, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PIN-CYLINDER LOCK.

Application filed June 27, 1922. Serial No. 571,312.

To all whom it may concern:

Be it known that I, WILLIAM T. CONEY, a citizen of the United States of America, residing at New Britain, Connecticut, have invented a new and useful Improvement in Pin-Cylinder Locks, of which the following is a specification.

My invention relates to improvements in so-called pin tumbler locks. The object is to provide simple and inexpensive means for preventing the lock from being rendered ineffective by drilling from the front through the several pin tumblers. Heretofore such locks have been provided in some instances with a special armor piece of hard material, such as steel, fixed in the cylinder or face plate at the front of the lock, the function of said armor being to prevent a drill point from being successfully used in drilling through the several pins. My invention accomplishes the same object, but entirely omits the aforesaid separate armor construction and the time, expense and labor of making and attaching the same to the cylinder.

In the accompanying drawings—

Fig. 1 is a vertical longitudinal section through the center of a pin cylinder lock constructed to embody my invention.

Fig. 2 is a section on the line 2—2 of Fig. 1.

1 represents the main body, or cylinder, of the lock. 2 represents the usual rotatable plug mounted in the body 1. 3 represents the usual "flat" key employed in such locks. Mounted within the cylinder and plug are so-called pin tumblers, each tumbler being made of two or more pieces whereby, when said tumblers are properly positioned by a correctly designed key, the adjacent ends of each pair of tumbler pieces will register with the line of division between the cylinder and the plug 2 (as shown in Fig. 1), whereby said plug 2 may be turned. When the key is withdrawn the pin tumblers are projected downwardly, so that portions will extend across said line of division and thus positively lock the plug 2 against rotation in the manner well known in locks of this type.

Ordinarily all such pin tumblers are made from relatively soft material, such as brass, which is easily drilled. My invention comprehends making one of said tumblers of hard metal, such as steel, which is not easily drilled, and which will therefore tend to deflect, or break, the point of a drilling tool, thus safeguarding the lock against this form of attack. The particular tumbler which is made of steel in the present case is shown as the outer tumbler and comprises the so-called "guard" portion 4 and the driver portion 5. 6 represents the usual tumbler spring.

While I have shown in the drawing the outermost tumbler as the one to be made from hard metal, I do not desire to be limited in this respect in every case, as the same end could be accomplished, only, perhaps, in a less satisfactory degree, by making one of the other tumblers of steel or the like. In the form shown I also, by preference, reduce the length of the bore in which the guard pin 4 stands relatively to the length of the bores for the other pins, whereby said guard pin will partake of only a very short movement. In Fig. 1 the guard pin is shown as properly elevated to unlock the plug 2, whereas, in Fig. 2, this pin tumbler is shown in its lowermost position, in which it would appear when the key 3 is removed.

By comparison with a lock in which a special armor piece is provided in a fixed position in front of the line of pin tumblers, it is at once apparent that my new means for guarding against the drilling of the lock is vastly cheaper, since it involves merely making one of the pin tumblers of hard metal instead of relatively soft metal, as before, whereby said pin tumbler itself will perform a double function, namely, a pin tumbler locking function and a guard function. The matter of assembly involves no cost, as that is completely absorbed in the cost of assembling the tumblers.

What I claim is:

In a pin tumbler lock, a cylinder, a plug rotatable therein, said plug having a key slot, said plug and cylinder having pin passages arranged to hold a plurality of pins, one of the pin passages in said plug being shorter than the others, and a guard pin of hard metal movable in the said shorter passage for the purposes described.

WILLIAM T. CONEY.