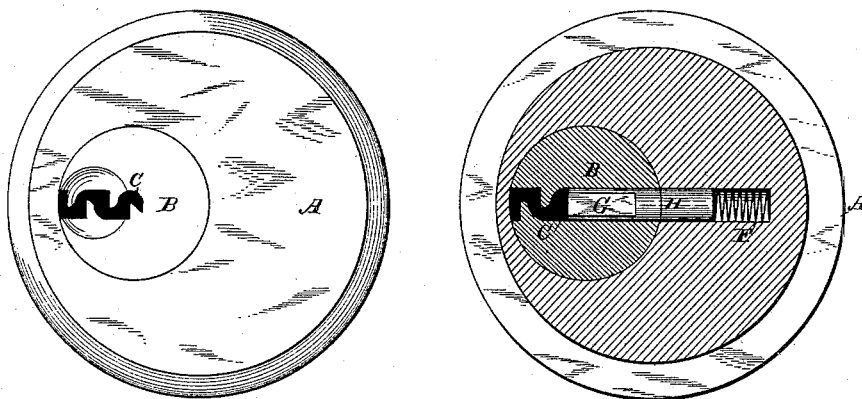
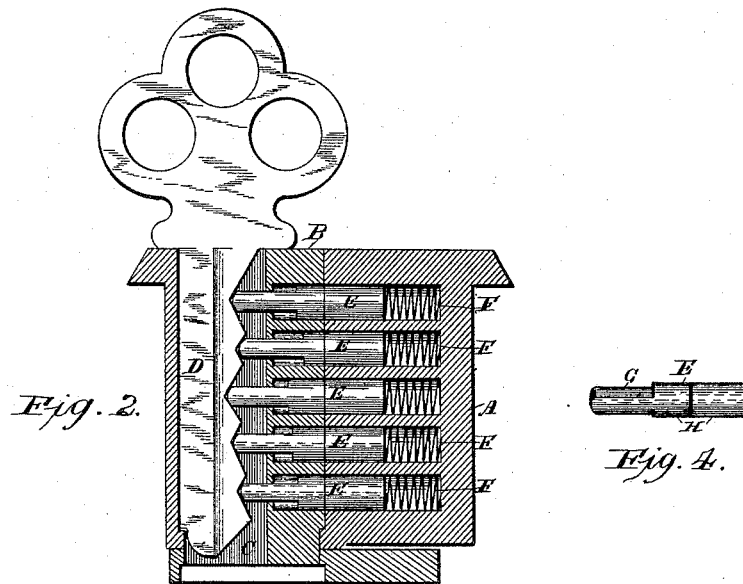


(No Model.)

W. H. TAYLOR.  
LOCK.

No. 456,917.

Patented July 28, 1891.



Witnesses *Fig. 1.*  
*Louis E. Gulikn.*  
*C. P. Elwell.*

*Fig. 3.* Inventor  
*Warren H. Taylor.*  
*Hopkins & Atkins.*  
Attorneys

# 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. 456,917, dated July 28, 1891.

Application filed April 18, 1891. Serial No. 389,457. (No model.)

*To all whom it may concern:*

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

My invention relates to that class of locks using sliding or pin tumblers, which tumblers fasten a key-cylinder or roll-back to its surrounding case until the tumblers are set by the insertion of the key, when the key-cylinder can be revolved to operate the lock.

My present improvements relate to pin-tumblers to be used with my improved lock of this class, in which I form a keyway with projections from its side walls extending past its center and in which I bevel or curve the tumblers at their lower ends upon either side of a central line transverse to the axis of the keyway. In tumblers suitable for such improved pin-tumbler locks it is essential that provision be made against their rotation, and I have heretofore shown means for accomplishing that object. By my present improvement, however, I have accomplished the result in a more advantageous manner by an improved tumbler which has a cylindrical bearing-surface above the keyway, but at the point where it intersects the way the tumbler is flattened or narrowed, so that when fitted in a tumbler-chamber of corresponding shape it cannot rotate, and being rounded or beveled on two sides of a central line at its bottom its broad key-bearing surface will always be held in proper position. A considerable advantage of this form of tumbler and tumbler-chamber is that the tumbler-chamber being narrowed at its intersection with the keyway there is less space into which a picking-tool can follow a tumbler, and also as the material of the cylinder is not cut away to so great an extent between the tumblers in the keyway it increases the material, or what is technically called "land," between one tumbler-chamber and another, which also adds to the difficulty of picking. I also regard the form of

tumbler here shown as advantageous in consequence of the greater ease of manufacturing the tumbler and the cylinder with a cylindrical bearing at some point in the length of the tumbler; but it is obvious that the particular shape of the tumbler throughout its length, whether rectangular or otherwise, is not material, the desirable feature being to have a tumbler which at its key-bearing end is of less width in the direction of the length of the keyway than at right angles thereto.

In the accompanying drawings, illustrating my invention, Figure 1 is a front end elevation of a pin-tumbler lock, showing my improved keyway. Fig. 2 is a longitudinal diametrical section showing the key in place. Fig. 3 is a cross-section showing one of the tumblers and its spring in elevation. Fig. 4 is a view of a tumbler detached.

Referring to the letters on the drawings, A indicates an escutcheon or tumbler-case such as is ordinarily used in this class of locks. The shape of the tumbler-case is not material, because this invention may be applied to locks of any other class, such as cabinet-locks, padlocks, &c.

B indicates the hub or roll-back; C, the keyway therein; D, the key; E, the pin-tumblers, and F their springs.

The tumbler-sockets extend from the escutcheon into the roll-back, as usual, and in general construction and operation my lock is similar to those of its class. The tumblers, it will be seen, are shown as flattened at G on opposite sides and are cylindrical at H. They might be flattened only on one side; but I prefer to flatten them on both sides, as shown, which may be done in any usual way familiar to metal workers.

What I claim is—

1. In a lock, a tumbler which is cylindrical at one end and flattened at the other end, upon which the key bears, and which flattened end is beveled or rounded from opposite sides of a central line, so as to make a wider key-bearing surface, substantially as described.

2. In a lock, a key-cylinder or roll-back provided with tumbler-recesses which are cylindrical in one portion and non-cylindrical in another, so that the tumbler which is fitted to said recesses can move at right angles to the axis of the key-cylinder and will not revolve on its own axis, substantially as described.

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

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,  
GEO. E. WHITE.