(No Model.)

W. C. THOMPSON.

LOCK.

No. 261,789. Patented July 25, 1882.

Fig 1

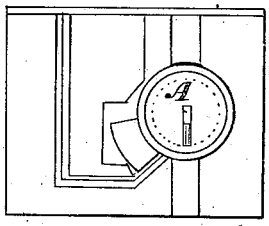


Fig 2

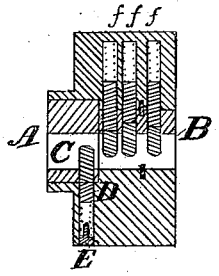
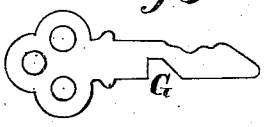


Fig 3



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM C. THOMPSON, OF MINNEAPOLIS, MINNESOTA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 261,789, dated July 25, 1882.

Application filed October 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CASPER THOMPSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Locks, of which the following is a specification.

The well-known "Yale" lock has been considered safe and secure; but I have discovered that it can be very easily picked by inserting the short end of an L-shaped wire into the key-hole, it being made flat, so as to fit the hole tight and turn the cylinder. By turning the cylinder with the wire a gentle pressure is brought against the sides of the tumblers, when those that are held fast are prized up with a small wire with a curved end. There being a steady pressure on the side of the tumbler when it is raised so the upper part passes ont of the cylinder, a slight forward movement is felt in the larger wire. The cylinder will then have turned enough to retain the upper part of the tumbler above it and prevent the lower part from being raised farther with the same force used before. The tumbler remains thus unlocked, and the others are manipulated in like manner until all are unlocked, when the wire turns the cylinder and withdraws the bolt.

The object of my invention is to prevent locks being picked, as described above, or being opened by any means except with their proper keys.

The invention consists of a cylinder or Yale lock, the cylinder of which is made in two parts, the front portion of which is furnished with a safety-tumbler.

The drawings and following description will fully explain the working of my invention.

Figure 1 is a plan showing front of lock. Fig. 2 is a sectional view, and Fig. 3 is a plan of key.

A is the front part of the cylinder; B, the rear portion, into which work the locking-tumblers *f f f*, and is separate from and independent of the part A.

C is the key-hole, passing through both parts of the cylinder. The part A of the cylinder being of larger diameter, the key-hole is not cut through to the outer surface, as it is in part B, as shown in Fig. 1, the dotted line representing the diameter of the rear part of cylinder.

D is a safety-tumbler consisting of two pieces with a spiral spring beneath, inserted in a hole drilled through the body of the lock and into the cylinder part A. The upper part of the tumbler equals in length the depth of the hole in the part A, so the division between the two tumbler parts comes on a line with the outer surface of the cylinder, allowing it to be freely turned when the tumbler is passed up into place by the spiral spring.

E is an adjusting-screw, with its center extended inside the spiral spring, which prevents the safety-tumbler being depressed farther than the bottom of the key-hole. Thus the cylinder part A is always locked when the safety-tumbler is pushed down.

G, Fig. 3, is the notch cut in the key, into which the safety-tumbler rises when the key is inserted in the lock.

To operate the lock the key is inserted at an angle of forty-five degrees until it enters above and depresses the safety-tumbler. It is then raised on a horizontal line and passed through the key-hole. The safety-tumbler rises again as the notch in the key comes over it, and the cylinder is free to turn.

The Yale lock cannot be picked if the cylinder cannot be turned and bind the tumblers, as heretofore described. To prevent its being turned I make the cylinder in two parts independent of each other. To prevent anything being inserted in the key-hole and again joining the cylinder parts, I furnish the part A with the safety-tumbler D, which fully answers the purpose sought.

The part A of the cylinder furnished with the safety-tumbler can also be used in combination with other locks of different devices which use a flat key. The part is held in position by suitable device. (Not shown in the drawings.)

What I claim is—

1. The combination of a divided key hub or cylinder with a safety-tumbler adapted to close a portion of the key-hole and leave the

front part of the cylinder unlocked when at rest, but locking said part of the cylinder when pressed back into its recess, substantially as described.

2. The combination of a divided key hub or cylinder and safety-tumbler with a flat or sheet-metal key provided with a notch to allow the safety-tumbler to return to its former position after being depressed by the insertion of the key, substantially as set forth, and for the purpose described.

WILLIAM CASPER THOMPSON.

Witnesses:
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