(Model.)

E. STOCKWELL.

PERMUTATION LOCK.

No. 304,244. Patented Aug. 26, 1884.

Fig. 1.

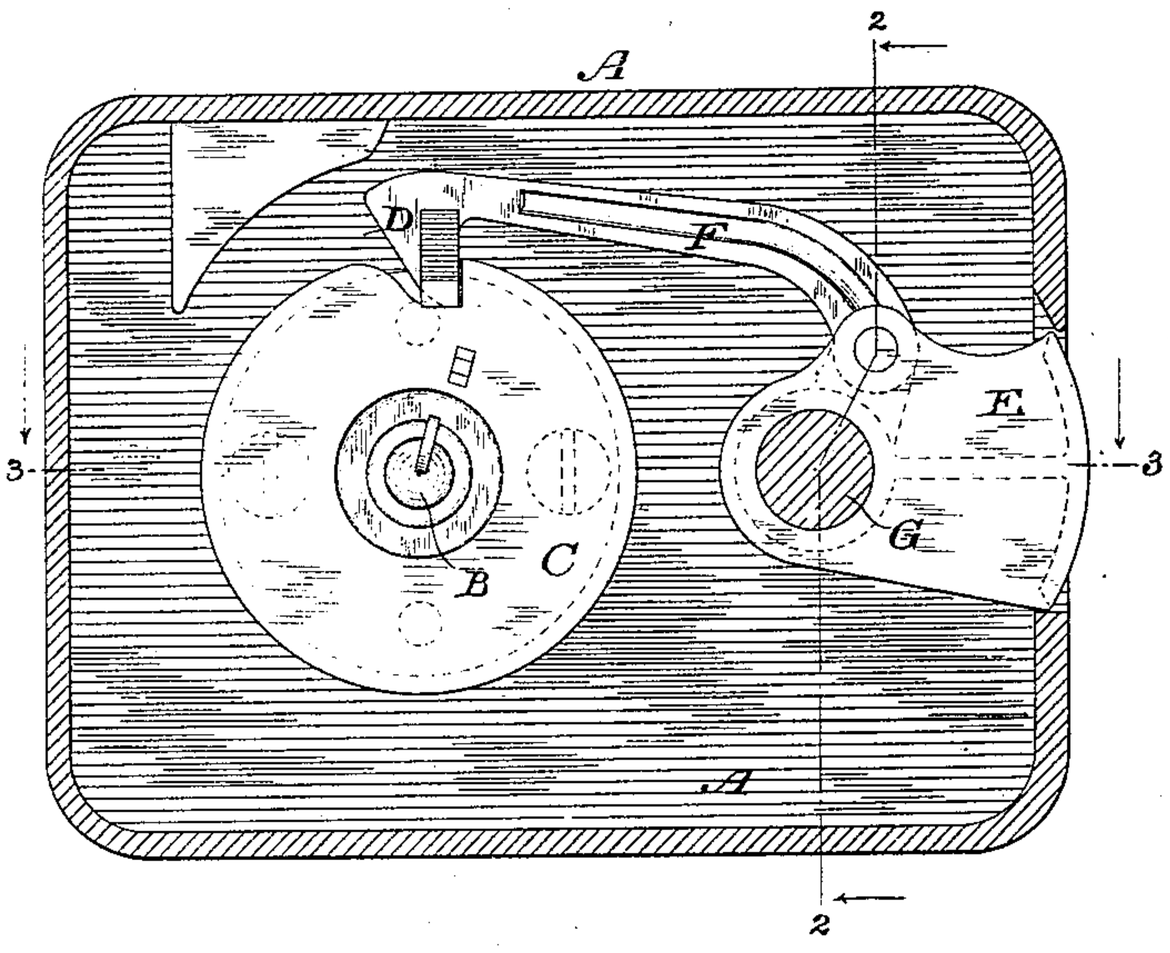


Fig. 2.

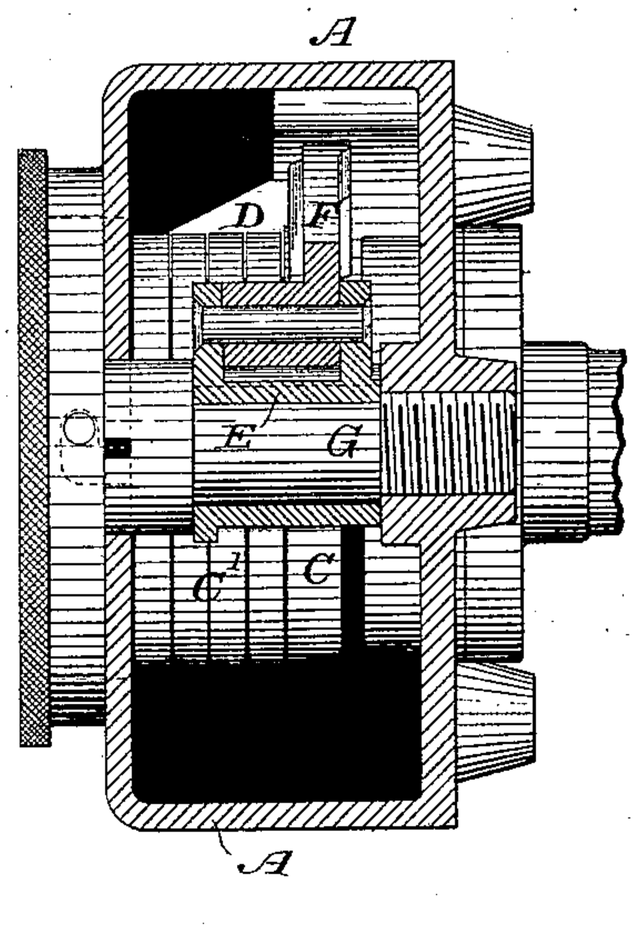
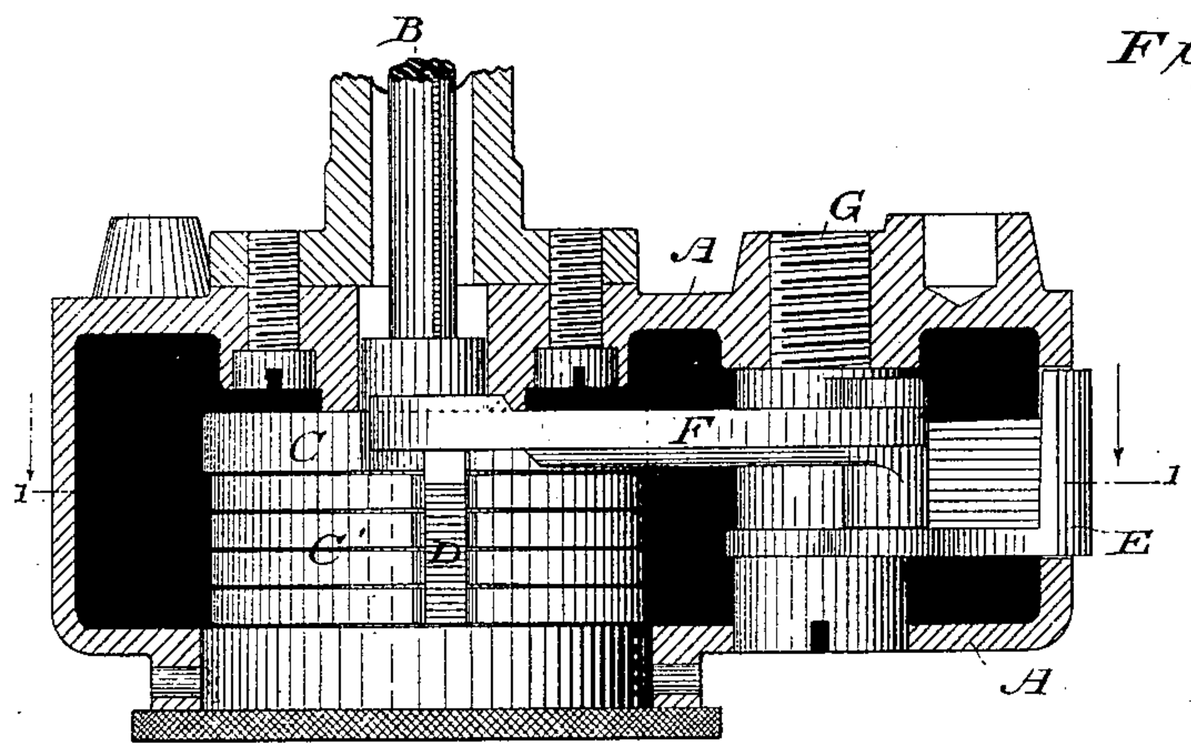


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

EMORY STOCKWELL, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF SAME PLACE.

PERMUTATION-LOCK.

SPECIFICATION forming part of Letters Patent No. 304,244, dated August 26, 1884.

Application filed August 30, 1883. (Model.)

To all whom it may concern:

Be it known that I, EMORY STOCKWELL, of Stamford, in the county of Fairfield, in the State of Connecticut, have invented a certain new and useful Improvement in Dial-Locks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to hand-changing tumbler dial-locks, and particularly to the adaptation of this class of dial-locks to bolts which are rotated into and out of the locked position—that is, bolts which are known as "rolling bolts."

Heretofore it has been customary, in locks provided with rolling bolts, to use tumblers the combination of which was changed by the use of a key, and which, when the combination was changed, did not require to be removed from the lock. In locks of this sort it has been usual to cast in one piece with the lock-case the stud or pivot on which the bolt rotates, and also the stump on which the tumblers rotate. The tumblers being then placed upon their stump, and the bolt upon its pivot, the lock was operative, and the cover was merely necessary to prevent the bolt from slipping out of place. This construction was necessary because in locks as heretofore made it has been impossible to get the bolt on its pivot, except when the back of the lock was taken off. In locks with key-changing tumblers there has been no special objection to this construction, because even if the cover should become loosened the only result which could happen would be that the bolt would tumble out, in which case the lock would be unlocked, but the loosening of the cover could not cause a lockout; but when hand-changing tumblers are used it is customary to remove the tumblers entirely from the lock whenever the combination is changed, and the tumblers are usually secured to the cover of the lock by means of the curb or otherwise. In order that the lock should be operative, it is essential that the tumblers should be held close up to the cam upon the end of the spindle. If, now, the tumblers are secured to the cover and the cover becomes loose, it is obvious that the tumblers will move away from the cam, and the lock will become inoperative and a lockout will ensue.

The object of my invention is to obviate these objections, which I do by casting the lock-case in one solid piece, or at least so much of it as contains the tumbler-curb. Then to enable me to insert the bolt of the lock through the bolt-hole I make the pivot or stud on which the bolt rotates removable. I am thus enabled to insert my bolt and its connection with the cam through the bolt-hole in the front of the lock, and then secure it in place by inserting the screw or bolt pivot. This enables me to use a wrought-iron or steel pivot, which will be stronger than a cast-iron one, and it gives the still further advantage of making it impossible that the tumbler-curb should move. Therefore the connection between the cam and the tumblers cannot in any manner be severed.

In the accompanying drawings, Figure 1 is a section of a lock embodying my improvements on the line 1 1 of Fig. 3. Fig. 2 is a section of the same on the line 2 2 of Fig. 1, and Fig. 3 is a section on the line 3 3 of Fig. 1.

A indicates the lock-case, cast in one piece; B, the spindle; C, the cam; C′, the tumblers; D, the fence; E, the rotary bolt, and F the pivoted link connecting the fence and rotary bolt, all except the case of usual construction.

G indicates the detachable bolt-pivot which screws into the lock-case.

I do not limit myself to the precise methods of construction here shown, because they can be varied in several mechanical details without departing from the substance of my invention.

I do not claim herein a lock-case cast complete in one piece, as shown in Fig. 7 of the drawings of my United States Patent No. 261,271, granted July 18, 1882.

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

1. In a dial-lock, the combination of a case cast in one piece, a rotating bolt, and a removable pivot for attaching said bolt to said case, substantially as described.

2. In a dial-lock, the combination of a case and tumbler-curb holder cast together in one piece, a rotating bolt, a cam with a detacha-

ble connection between the cam and bolt, and a removable bolt-pivot, substantially as described.

3. The combination of a case cast in one piece without a removable plate, a tumbler-curb holder cast integral therewith, a rotary bolt, and a removable pivot for attaching the bolt to the case, substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 28th day of July, A. D. 1883.

EMORY STOCKWELL.

Witnesses:
GEO. E. WHITE,
SCHUYLER MERRITT.