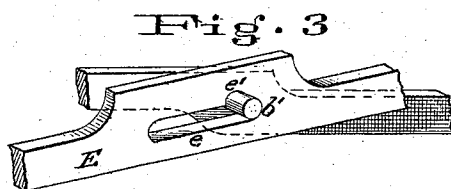
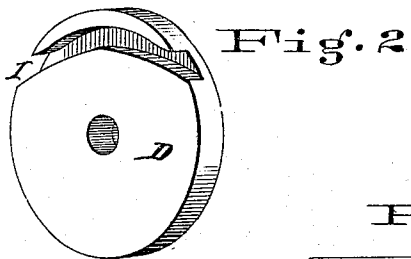
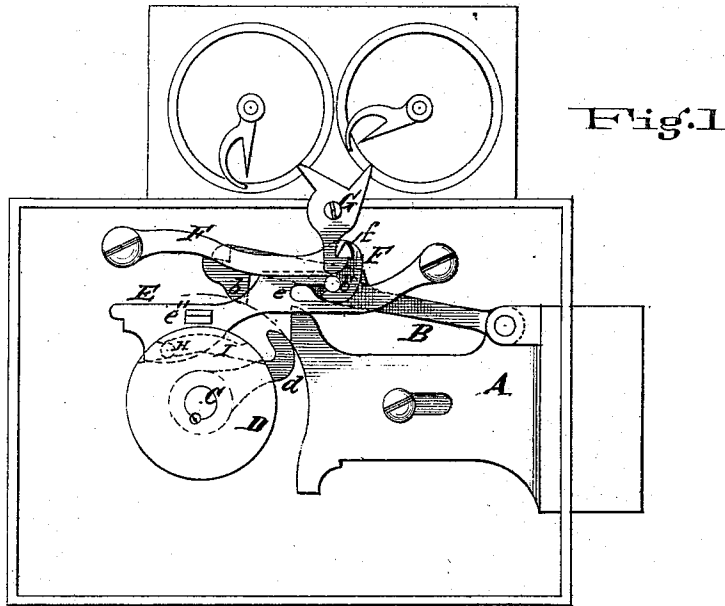


H. GROSS.

TIME ATTACHMENTS FOR LOCKS.

No. 177,054.

Patented May 2, 1876.



Inventor

Attest

Edgar J. Gross
John E. Jones

Henry Gross
By Y. Millward
Atty

UNITED STATES PATENT OFFICE

HENRY GROSS, OF CINCINNATI, OHIO, ASSIGNOR TO THE HALL'S SAFE AND LOCK COMPANY, OF SAME PLACE.

IMPROVEMENT IN TIME ATTACHMENTS FOR LOCKS.

Specification forming part of Letters Patent No. **177,054**, dated May 2, 1876; application filed March 16, 1876.

To all whom it may concern:

Be it known that I, HENRY GROSS, of Cincinnati, Hamilton county, State of Ohio, have invented an Improvement in Time Attachment for Locks, of which the following is a specification:

My invention consists in a certain attachment of the time-trigger and peculiar connection of the gravitating arms, which connect with the tumblers, so that, while the gravitating hooked arm by which the bolt is thrown is governed by the clock, the angle-bar or tumbler-dog is left free to operate in the ordinary way, so that the tumbler can be set to the combination, and the ordinary motion to open the lock proceeded with, without the engagement of the hooks necessary to throw the bolt.

Figure 1 is an elevation of a lock embodying my improvement. Fig. 2 is a perspective view of the drive-wheel. Fig. 3 is a perspective view of two of the gravitating arms.

A is the bolt of the lock. B is the gravitating arm, having the hook *b*, by which the bolt is thrown. C is the spindle or arbor, having the customary tumblers; and D the drive-wheel which carries the hook *d*, which engages with the hook *b* to throw the bolt. E is the angle-bar or tumbler-dog, provided with the usual slot *e*, and, in addition thereto, a vertical notch, *e'*. The pin *b'* of the arm B moves in the slot and notch *e e'*, and the same pin extends forward, and is engaged by the hooked arm F in Fig. 1. This arm F is pro-

vided with a projection, *f*, under which the hook of the time-trigger G engages when the lock is not permitted to be opened. In this condition, as shown in Fig. 1, the time-trigger G sustains the hooked arm B, so that the driving-hook *d* cannot engage with it, although the tumblers may have been adjusted, and although, owing to the provision of the notch *e'*, the tumbler-dog E may have fallen so that its projection *e''* may be within the notches of the tumblers, and the driving-hook *d* free to rotate. In order that this driving-hook may have free rotation, without affecting the other parts of the lock when the time attachment is connected, I make the groove I of the drive-wheel D, into which the pin H of the dog E fits, clear across the face of the wheel, and as the drive-wheel rotates it is simply permitted to raise and lower the dog E without affecting any other part of the lock.

I claim—

In combination with the time-trigger G, the hooked arm F *f*, notched angle-bar or dog E *e'*, and hooked arm B *b b'*, connected and operating in the manner substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

HENRY GROSS.

Witnesses:

EDGAR J. GROSS,
C. B. PARCELLS.